Insights on Boards' Ability and Non-Executive Directors' Incentives: Evidence from the UK

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Submitted for the degree of
Doctor of Philosophy in Accounting and Finance

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February, 2019

Abstract

This thesis investigates two main prerequisites for diligent executions of boards' roles i.e. board's ability and directors' incentives. The first part of this thesis offers some insights into boards' characteristics of most concern to both regulators and scholars. Specifically, it provides a timely review, over the last fifteen years (2000-14), of different board's diversity attributes (i.e. statutory, competitive, and demographic), board's competitive capital, and board's busyness in the UK public listed companies. In addition, it investigates whether differences exist in those characteristics across various FTSE Indices and also before and after the financial crisis.

Firstly, it is found that statutory diversity is commonly shared among the boards compared to other diversity attributes, i.e. competitive and demographic. This reflects the regulators' focus on statutory diversity over the years. Nonetheless, the data shows that the UK public listed companies were increasingly diversifying their boards, competitively and demographically, over the last fifteen years. During the post-crisis period, UK boards witnessed a significant increase in diversity level, especially BOFIs' boards. This is consistent with many commentators' calls for more diversified boards after the crisis. Secondly, with regard to board's competitive capital, there is a general increase in different board's competencies. In line with the recommendations of post-crisis regulations, the analysis shows a significant increase in the level of board competitive capital of UK boards over post-crisis period. Thirdly, although the literature used different measures of board busyness, the findings suggest that the incidence of board's busyness seems to be decreasing over the last fifteen years in the UK regardless of the measurement used. Furthermore, the data suggests that the post-crisis attempts to limit the occurrence of board busyness are successful as UK public listed companies witnessed a significant decrease in the percentage of busy boards. Fourthly, correlation analysis indicates a significant positive relationship between all diversity indices and board's competitive capital, and market-based measures of firm financial performance. The analysis also shows no correlation between general measures of board's busyness and firm performance.

The second part of this thesis involves two empirical chapters dedicated to exploring the extent of efficiency of the UK directors' employment market, both internally and externally, in potentially creating incentives for NEDs to behave in the shareholders' interests. Chapter Four specifically investigates to what extent NEDs in the UK 'external' employment market is rewarded (penalised) through gaining (losing) an external board seat for their perceived satisfactory (unsatisfactory) performance. On the other hand, Chapter Five investigates to what extent NEDs' probability of turnover (i.e. internal employment market) is associated with their perceived (un)satisfactory

performance. The focus on these two chapters is on NEDs serving on banks and other financial institutions (BOFIs). NEDs' perceived performance is expected to be based on the performance of NEDs' affiliated firm(s) and their individual set of qualifications and skills (i.e. reputational capital).

The findings in Chapter 4 provide evidence that the number of board seats held by NEDs in the BOFIs is mainly associated with their reputational capital rather than the performance of their affiliated firm(s). However, both the affiliated BOFIs' market performance and reputational capital are significantly associated with NEDs' number of board seats in the post-crisis period. The results may be attributed to the changes in the corporate governance environment after the crisis whereby NEDs were held more accountable for their BOFIs' poor market performance.

Finally, the results in Chapter 5 show a significant correlation between NEDs' turnover and their affiliated firm's financial performance, and reputational capital relative to the board. It also indicates that, following the crisis, only the turnover-performance association is statistically significant. This suggests the existence of ex-post settling-up mechanism in the UK BOFIs whereby NEDs can lose their board seats in the wake of a period of poor financial performance.

DEDICATION

To the Elseedawys, Dr. Emad Elseedawy, Mrs. Hanan Elseedawy, Dr. Mohamed Elseedawy, and Dr. Youssef Elseedawy. I am forever thankful to call you my family!

Acknowledgements

Praise be to God for the countless blessings bestowed upon me, for giving me this opportunity, for the strength and the patience to complete this thesis despite the challenges. No words can convey my gratitude.

First and foremost, I would like to extend my deepest appreciation to Professor Ros Haniffa, my lead supervisor, for her encouragement, guidance, continuous support and immense knowledge throughout my PhD Journey. Her invaluable supervision and dedication to high-quality work inspired me to give my best. I would like to thank Professor Mustafa Caglayan, my second supervisor, for numerous helpful advices and discussions. I am indebted to Professor Mustafa for several discussions that helped me progress further. I have been very fortunate with my supervisors. At Heriot-Watt University, I would like to acknowledge the rich and supportive environment, I am very grateful for the opportunity the university has given me. I would like also to thank the School of Social Sciences (formerly the School of Management of Languages) for the granting me the school scholarship, without which I could not have completed my PhD.

This journey would not have been possible without the loving support and presence of my dear friends and family. I am forever thankful to Dr. Amal Abdelhakam who provided me with unbounded personal and academic support since day one. I would like to thank my friend and colleague, Ahmed Salhin for his help and support whenever needed. I would also like to thank Sering for his friendship and motivation. Many thanks are due to my friends at Edinburgh, Fisayo, Wahida, Hussain, Maynek, and many other. My dear friend Yassmien has been a great help I can always count on. Thank you all.

No words can describe my heart-felt gratitude to Dr. Emad and his family, they have been a second family to me and their endless care and love have provided me with the strength I needed to keep going. To my family and the soul of my loving father, I thank you for everything you have given me; being part of this family is my greatest blessing. Father, I only wish I made you proud, you have always been my role-model. My beautiful mother, your unconditional love has always been a force that guided me. Aliaa, being my older sister has always been a source of joy, thank you for always being there and for having faith in me. To my younger sister, Salma, your presence has been a blessing I am always thankful for.

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Abbreviations

Acronym	*Phrase*
NEDs	**N**on-**E**xecutive **D**irectors
EDs	**E**xecutive **D**irectors
CEO	**C**hief **E**xecutive **O**fficer
CRO	**C**hief **R**isk **O**fficer
BOFIs	**B**anks and **O**ther **F**inancial **I**nstitutions
CSR	**C**orporate **S**ocial **R**esponsibility
RBV	**R**esource-**B**ased **V**iew of the firm
IIC	The UK **I**nstitutional **I**nvestor **C**ommittee
FCA	**F**inancial **C**onduct **A**uthority
PRA	**P**rudential **R**egulation **A**uthority
PCBS	**P**arliamentary **C**ommission on **B**anking **S**tandards
SM&CR	**S**enior **M**anagers and **C**ertification **R**egime
IFRS	**I**nternational **F**inancial **R**eporting **S**tandards
GAAPs	**G**enerally **A**ccepted **A**ccounting **P**rinciples
BSD	**B**oard's **S**tatutory **D**iversity
BCD	**B**oard's **C**ompetitive **D**iversity
BDD	**B**oard's **D**emographic **D**iversity
PLCs	**P**ublic **L**isted **C**ompanies
NFFs	**N**on-**F**inancial **F**irms

Chapter 1

Introduction

1.1. Overview

'The entirely preventable financial catastrophe we have watched unfold over the past 18 months has many culprits: reckless executives who gambled with their company's futures, feckless regulators and somnambulant boards of directors. But while executives and regulators have justifiably taken heat for this multifaceted debacle, board members have largely been let off the hook. Why?'

(The Washington Post, 2009)

In popular accounts, the boards of failed BOFIs[1], especially the non-executive directors (NEDs), were blamed for failing to do their jobs of monitoring firms' management and ensuring their long-term survival effectively. The criticism against NEDs, who are presumably central to the financial crisis, ranges from questioning their relevance to firms' performance to highlighting some of their 'fixable' deficits that may have undermined performance. Each end of this spectrum suggests different types of solutions to prevent future high-profile crises.

The first group of solutions are motivated by the notion that reliance on board of directors, especially NEDs, as the main governance mechanism is at best

[1]This is the acronym used in the Walker Review (2009) when referring to the financial sector.

misplaced due to several structural challenges as debated in the literature; for example, the 'board capture' (Masulis and Mobbs, 2011), the 'independence paradox' (Kang, Cheng, and Gray, 2007), and the 'inconsistency of boards' dual role' (Kim, Mauldin, and Patro, 2014). These inherent obstacles, arguably insurmountable, in the modern boards render NEDs ineffective in shaping firm's behaviour. Therefore, corporate governance reforms should focus on improving effectiveness of capital market discipline (e.g. mandating transparency, incentivising informed trading, and increasing accountability) rather than 'misguided' board-based regulatory solutions (Fisch, 2010).

The second group of solutions still believes in the vital role NEDs play in today's corporate governance. For this group, the crisis can be traced to some board-level deficits related to NEDs' traits that need attention and improvement. For instance, the proxy statement by Bear Stearns Companies in 2007 shows two members of its audit committee having six external seats on other audit committees. However, the board stated that this "does not impair their ability to effectively serve on the Company's Audit Committee and that their service on the Audit Committee is in the best interest of the Company and its stockholders". Proponents of this view continue to argue that business history has shown that market discipline alone is not sufficient to guide firms' management to act in shareholders' best interest. Consequently, regulators are most encouraged to tackle these board deficits through a series of board-centred legislation.

Among the various NEDs' 'fixable' attributes, the most highlighted issues in the media and targeted by regulators are those related to their incompetence, lack of commitment and busyness, and insufficient incentives. They highlighted that NEDs would be more vigilant and able to prevent their firms' excessive risk taking if they had enough expertise and knowledge, were more committed to their firms, and had an appropriate incentive structure in place. Indeed, since the financial crisis, many researchers attempt to test this notion by examining the association between US boards' general attributes and their firms' performance during the crisis. These board attributes include CEO's compensation structure (Fahlenbrach and Stulz, 2011), shareholders friendly boards (Beltratti and Stulz, 2012), boards' independence (Erkens, Hung, and Matos, 2012; Minton, Taillard, and Williamson,

2011), boards' financial experience (Minton et al., 2011), boards' risk-governance (Aebi, Sabato, and Schmid, 2012), and internal corporate governance mechanisms (Cornett, McNutt, and Tehranian, 2009). The implication of such studies is that, if BOFIs with 'healthy' boards performed relatively better during the crisis, then regulators' intervention by imposing more board-centred reforms is justified and worth pursuing further in the future. However, the results of these studies are mostly inconclusive and cannot be generalised due to the significant differences in regulations across the countries in addition to their narrow focus on only the crisis period.

Consistent with the second view, this thesis holds boards in general and NEDs, in particular, to be capable of preventing future corporate governance crisis if some improvements are made in two aspects; boards' ability and incentive system. This thesis consists of three main empirical chapters that address various criticisms related to boards with a particular focus on NEDs. The first one focuses on the deficits or shortfalls in the boards' abilities, while the other two chapters are dedicated to directors' employment market as a potential incentive structure in the UK.

1.2. Background of the Study

The financial sector is undeniably an essential and crucial sector in today's economy. The importance of BOFIs is not only due to the strategic resources that they control but also their major role in reinforcing good corporate governance. In Continental Europe, banks have been an active contributor in maintaining corporate governance healthy through equity-holdings and reciprocal board membership. In the UK, banks traditionally failed to play an active role but other financial institutions such as pension insurance and mutual funds (i.e. the capital market) have shown a potential role in ensuring a healthy corporate governance environment. Indeed, over the last two decades, the UK government and shareholder activists (e.g. UK Institutional Investor Committee) have been encouraging such role, leading the institutional shareholders to be among the main market conditioning force in the UK (Mallin, Mullineux, and Wihlborg, 2005). In addition,

BOFIs also contribute in assuring good corporate governance by creating competition for external funds among other firms. In their quest of seizing these limited fund opportunities, firms tend to distinguish themselves by being more transparent and governance codes- compliant.

Given the vital functions of the financial sector to the economy and the country's corporate governance environment, the financial sector itself must therefore be efficient (Mallin et al., 2005). Hence, it is not surprising to find the financial sector being a highly regulated sector and subjected to greater governmental scrutiny. Directors of BOFIs have always been of central interest not only to regulators but also the public since they are effectively the ones who control strategic resources for the entire economy and their decisions can considerably affect the wider society welfare. In the wake of the recent global financial crisis, a series of concerns regarding BOFIs' boards and NEDs have arisen.

One aspect is related to how competent BOFIs' boards are in executing their roles. It has been highlighted that BOFIs' poor performance pre- and during the crisis was not only due to management's opportunistic behaviour that boards failed to control, but also management's incompetence that board failed to compensate by providing adequate advice. The unacceptable performance of boards during the crisis is acknowledged as a failure of both control and advisory/service roles. Thus, there has since been calls for more empirical work on board capital; a construct that is "recently coined... to capture the ability of the board to provide resources to the firm (p.1145)" (Haynes and Hillman, 2010).[2] Board capital refers to both human (skills, qualifications and experience) and social (networks) capital but most prior studies focus on either one of the capital. As argued by Tian, Haleblian, and Rajagopalan (2011), "only limited empirical work has examined board human and social capital simultaneously. Previous studies on board capital

[2]Board capital (Hillman and Dalziel, 2003) is sometimes called the 'board competitive capital' or 'board competence' (Huse, 2005). This usually includes the directors' relational or social capacity, in addition to their general, functional, board-specific knowledge and skills. It is distinguished from board characteristics which include "age, tenure, seniority, gender, race, individual behaviour, esteem, influence, independence, integrity and so on" (Huse, 2005: S69). This thesis tends to use the term 'board competitive capital' as it better reflects the difference between board's skills, which are sought in the employment market, and other board characteristics.

are also limited in the sense that they lack a systematic, task-relevant classification scheme of board capital (p.732)".

Another aspect of concern is the board incentives system, especially those related to NEDs. Research conducted in this area focuses on two main proxies for board incentives i.e. board independence and compensation. In the case of board independence, there have been many studies examining the association between NEDs' independence and performance. However, studies on the relationship between NEDs' compensation and performance are under researched compared to CEOs' compensation. In countries like the US, NEDs' compensation package include bonus in the form of cash and equity depending on their performance. However, in the UK, NEDs are rewarded fixed payments regardless of their performance and this lack of incentives has been recognised by the Parliamentary Commission on Banking Standards (2013) as among the main reasons behind the financial crisis. Another emerging strand of research looks at incentive system based on the directors' employment market. Specifically, the consequences that NEDs face in that employment market can be seen as an ex-post mechanism for settling-up whereby NEDs can be penalised (rewarded) in the wake of a period of poor (good) performance. Given the limited research in addressing this issue, this thesis will focus on this aspect as explained further in the next section.

1.3. Research Objectives

The thesis explores two contemporary issues that have been suggested as main contributors to boards' poor performance during the financial crisis, i.e. boards' deficits (*ability*) and NEDs' incentives (*motives*). It aims to first explore holistically some of the main antecedents of board's task performance. The second issue is addressed by examining the role of directors' employment market in penalising and rewarding NEDs based on their perceived performance.

Specifically, Chapter 3 extends the literature discussion on board deficits both before and after the crisis. Based on a large database that spans over fifteen years (1999-2014), it reports on three main antecedents of board task performance

(i.e. the diversity, capital, and commitment) in the UK public listed firms. By doing so, the chapter aims to provide a timely review of the extent to which post-crisis reforms affected boards' diversity, capital, and commitment for UK listed BOFIs and non-financial sectors. It also explores how these most targeted boards' characteristics vary across different UK FTSE Index Series and also the extent to which they are related to firms' financial performance. It is noteworthy that Chapter 3 differentiates between two terms, board competitive capital and board competitive diversity. The first is concerned with the aggregate number of qualifications and skills present on the board. However, the second term, board competitive diversity, captures how diverse these skills and qualifications are and it is one of three main attributes of board diversity.

Chapters 4 and 5 focus on NEDs' incentive structure. While previous studies extensively examine directors' remuneration structure, this is limited in the UK context which discourage equity-based compensations for NEDs. However, the employment market can play a major role in a NED's incentives by rewarding NEDs capable of protecting shareholders' interests. Hence, Chapters 4 and 5 explore how external market mechanism (i.e. NEDs' number of directorships) and internal market mechanism (i.e. NEDs' turnover) are tied to NEDs' perceived performance in the UK market, respectively. As discussed in the following section, NEDs' perceived performance is expected to be based on the performance of NEDs' affiliated firm(s) and their individual set of qualifications and skills (i.e. reputational capital).[3]

In short, the key research aims addressed in this thesis can be categorised into two parts as follows:

[3]NED's 'reputational capital' is a measure of director individual skills, knowledge, and qualifications. Therefore, this measure is conceptually related to the board's 'competitive capital' introduced earlier which is an aggregate measure of the reputational capital of all directors sitting on that board. This thesis uses the terms 'competitive' and 'reputational' capital to distinguish between the unit of interest. The former term is used with boards reflecting the competitive advantage that a firm achieves by having an overall competitive board, while the latter term is used with NEDs reflecting their attractiveness in the employment market.

Part I: *To provide a timely review, over the last 15 years (2000-14), of boards' characteristics of most concern to both regulators and scholars, in the UK's plcs.* There are four specific research objectives related to this part of the thesis which are addressed in Chapter 3:

1. Explore the extent of changes in the boards' diversity attributes (i.e. statutory, competitive, and demographic) of companies listed in the UK over the last fifteen years as well as within the various UK FTSE Index Series in the pre- and post- the financial crisis period.

2. Explore the extent of boards' competitive capital (i.e. educational qualifications, social networking, and governance experiences) of the companies listed in the UK over the last fifteen years as well as within the various UK FTSE Index Series in the pre- and post- the financial crisis period.

3. Explore the extent of boards' busyness of the companies listed in the UK over the last fifteen years as well as within the various UK FTSE Index Series in the pre- and post- the financial crisis period.

4. Determine if any relationship exists between the various boards' characteristics (i.e. diversity, competitive capital, and busyness) and the company's market-based financial performance.

Part II: *Explore the efficiency of the UK directors' employment market in potentially creating incentives for NEDs to behave in the market players' interests (e.g. shareholders).* There are three specific research objectives related to this part of the thesis which are addressed in Chapters 4 and 5, respectively:

5. Investigate to what extent NEDs in the UK market are subjected to an external sanction system whereby NEDs are rewarded (penalised), based on their affiliated firm's performance and reputational capital, through gaining (losing) an external board seat.

6. Investigate to what extent NEDs' probability of turnover is associated with the NEDs' affiliated firm performance and their reputational capital.

7. Considering the recent post-crisis governance reforms, determine to what extent the internal and the external UK directors' employment market have been affected as incentives mechanism.

Table 1.1 presents a summary of the research objectives and specific research questions as well as research methods adopted in addressing the two parts of the study in this thesis.

1.4. Research Conceptual Framework

1.4.1 Firms' Internal Control Mechanisms

The opportunistic behaviour and incompetence of the modern managements are not a new phenomenon. However, the approach taken by different market players (e.g. shareholders and regulators) in addressing such problems varied considerably over the history of corporations; particularly since Berle and Means (1932) identified the inherent problems of separating ownership and control. In theory, external control mechanisms in the form of the markets for corporate control (e.g. hostile takeovers) were the most common reaction for such managerial behaviour up until the 1980s after which corporations began to utilise various anti-takeover strategies (e.g. poison pills, golden parachutes, and greenmail). At that time, the markets also witnessed a movement of shareholder activism that calls for an independent board of directors who are capable of controlling firms' managements and challenging their decisions.

These calls were pillared on the agency theory that discusses solutions to ownership-control separation dilemma (Fama and Jensen, 1983). Agency theory depicts the executives of modern corporations as agents who have their own self-interest to pursue and utility to maximise, even if it is at the expense of shareholders' interests.[4] The divergence in interests results in a cost for the firm that

[4]Agency theory is built on the model of man which suggest that maximisation of individual economic utility is the main driver of any rational actor (Bammens et al., 2011; Davis, 1997). Hence, rational agents or principals will always seek the choice that increases their own personal utility.

Table 1.1
Summary of the Study's Research Questions

	General Objective		Research Questions	Unit of interest	Conceptual. Models	Study	Ch.
Part one: Boards' Ability	Provide a timely review, over the last 15 years of boards' characteristics of most concern to companies listed in the UK.	**Obj.1**	**Q1a)** Are there significant changes on the diversity attributes (i.e. statutory, competitive, and demographic) of boards of companies listed in the UK over the last fifteen years?	Board of Directors	Figure 1.2	Descripto-explanatory research	Chapter 3
			Q1b) Are there significant differences in the boards' diversity attributes across various FTSE Indices?				
			Q1c) Are there significant changes in the extent of board-level diversity attributes before and after the financial crisis?				
		Obj.2	**Q2a)** Are there significant changes in the competitive capital of boards of companies listed in the UK over the last fifteen years?				
			Q2b) Are there significant differences in the boards' competitive capital across various FTSE Indices?				
			Q2c) Are there significant changes in the boards' competitive capital before and after the financial crisis?				
		Obj.3	**Q3a)** Are there significant changes in the level of boards' busyness of companies listed in the UK over the last fifteen years?				
			Q3b) Are there significant differences in the level of boards' busyness across various FTSE Indices?				
			Q3c) Are there significant differences in the level of boards' busyness before and after the financial crisis?				
		Obj.4	**Q4)** Are there significant relationships between boards' characteristics (i.e. diversity, competitive capital, and busyness) and market-based financial performance of companies listed in the UK?				

Table 1.1 ***(Continued)***
Summary of the Study's Research Questions

Part two: Directors' Incentives	Explore the efficiency of the directors' employment market in potentially creating incentives for NEDs in the UK listed companies to behave in the shareholders' interests.	**Obj.5**	**Q5a)** Is there a significant relationship between the number of board seats and performance of firms affiliated to the NEDs?
			Q5b) Is there a significant relationship between the number of board seats and NEDs' reputational capital?
			Q5c) Is there a significant change in the relationship between number of board seats and the NEDs' affiliated firms' performance and NEDs' reputational capital in the post-crisis period?
		Obj.6	**Q6a)** Is there a significant relationship between performance of firms affiliated to the NED and probability of NED's turnover?
			Q6b) Is there a significant relationship between a NED's reputational capital relative to the board and probability of NED's turnover?
			Q6c) Is there a significant relationship between a NED's commitment status (busyness) relative to the board and probability of NED's turnover?
			Q6d) Is there a significant change in the relationship between NEDs' affiliated firms' performance, relative reputational capital, relative busyness, and the probability of NED's turnover in the post-crisis period?

NEDs

Figure 1.3

Explanatory research

Chapter 4

Chapter 5

can only be curbed by having a proper internal control mechanism and hence, an independent board of directors are elected by the firm's shareholders to monitor its executives (Fama and Jensen, 1983). Henceforth, regulators have been trying to reinforce firms' internal control through a series of reforms that encourage, for instance, the separation of CEO and chairman positions, having a majority of independent directors on the boards, and the complete independence of boards' audit and remuneration committees.

In the 1990s, due to the unprecedented integration of markets and the boom in information technology, capital markets around the globe witnessed an expansion of multinational and multi-listed corporations, and a shift in the attention to the market stock prices rather than dividends (Huse, 2005). Hence, boards' role was leaning away from behavioural control towards output control in financial markets. Governance reforms were mirroring this trend by promoting increased transparency and accountability to shareholders and relying more on equity-based compensation for directors.[5]

However, in the early 2000s, the high-profile collapsed of large corporations (e.g. Enron, and WorldCom) brought the issue of NEDs' accountability to light (e.g. the Higgs Review) (Roberts, McNulty, and Stiles, 2005). The accountability of firms and NEDs were and still remains as a controversial topic among scholars and commentators. Debates on the expectations of different stakeholders regarding the role of firms and NEDs and ways to "align actual board task performance to board role expectations" (Huse, 2005: p.S74) still continues. Research in this area involves calls for adopting a broader perspective of corporate governance where corporations are expected to include a corporate social responsibility (CSR) agenda, and regulators are encouraged to regulate CSR reporting and include stakeholder's representations on boards (Kochan, 2003). At the director level, the discussion of NEDs' accountability includes the necessity of moving beyond the narrow and external focus of the agency theory towards a theoretical pluralism

[5]In the US, directors' remunerations, especially for executives, are more aligned with shareholders' interests through using equity-based compensation.

approach that balance between the internal and external perspectives on NEDs' accountability (Roberts et al., 2005).

1.4.2 Balancing the Perspectives on Boards' Roles

While the external perspective of NEDs' accountability relies solely on agency theory (Bammens, Voordeckers, and Van Gils, 2011), the internal perspective have a multi- theoretic basis such as stewardship theory (Davis, 1997), resource dependence theory (Pfeffer and Salancik, 1978) and the resource-based view of the firm (Barney, 1991). The stewardship theory, unlike the agency theory, suggests that managers are not opportunistic individuals and can be trusted with the resources they manage (Davis, 1997). It claims that there are "situations in which managers are not motivated by individual goals, but rather are stewards whose motives are aligned with the objectives of their principals (p.21)" (Davis, Schoorman, and Donaldson, 1997). Therefore, it basically shifts the main role of boards from monitoring to mentoring (Bammens et al., 2011).[6] The content of the board service role is elaborated upon from the other two theoretical perspectives; resource dependence theory, and the resource-based view of the firm.

Resource dependence theory suggests that firms, due to pressure from its surrounding competition and uncertainty, would seek out linkages with its external environment to get access to or control over valuable resources (Boyd, 1990). It further emphasises on the role of boards of directors as a tool of forming these linkages with the environment, the co-called networking and lobbying task (Minichilli, Zattoni, and Zona, 2009). This task involves, for instance, securing external finance, conveying information on competitors and industry, and enhancing firms' legitimacy (Li, Parsa, Tang, and Xiao, 2012). On the other hand, resource-based

[6]NEDs' roles have been categorised into several groups. The most common used categorisation is service/mentoring/advisory and control/monitoring roles (Forbes and Milliken, 1999; Hillman and Dalziel, 2003; Sundaramurthy and Lewis, 2003). Huse (2005) further splits each role into three main subcategories. That is, control role (external perspective on NED role) includes behavioural control, output control and strategic control, whereas service role (internal perspective on NED role) is divided into advice/council, networking/legitimacy and strategic participation. For a detailed discussion of how board roles have evolved in the UK, see Machold and Farquhar, (2013). It is worth mentioning that a line of studies argues against the categorisation of NEDs' role into two distinctive separable roles. For a detailed discussion on this issue, see e.g. Brickley and Zimmerman (2010) and Fisch (2010).

view (RBV) of the firm (Barney, 1991) highlights another subtask of boards' service role to advice and counsel. In this view, firms seek directors who could provide valuable 'resources' that enhance decision-making process through their vocational qualifications, competences, and network (Minichilli et al., 2009).

Creating accountability among NEDs starts with identifying different stakeholders' expectations regarding board roles (Huse, 2005; Li et al., 2012). Directors are then encouraged to balance those role expectations and to accordingly match them with their actual performance.

1.4.3 The Integrated Model of Board Roles, Antecedents and Firm Performance

Hillman's and Dalziel's (2003) integrated model of board functions, antecedents, and firm performance (see Figure 1.1) is among the first attempts to link between boards of directors and their firm performance by balancing between the two main perspectives, i.e. internal and external roles of the boards. The model suggests that board capital affects both the monitoring and service roles of the board; while board's incentives moderate this relationship.

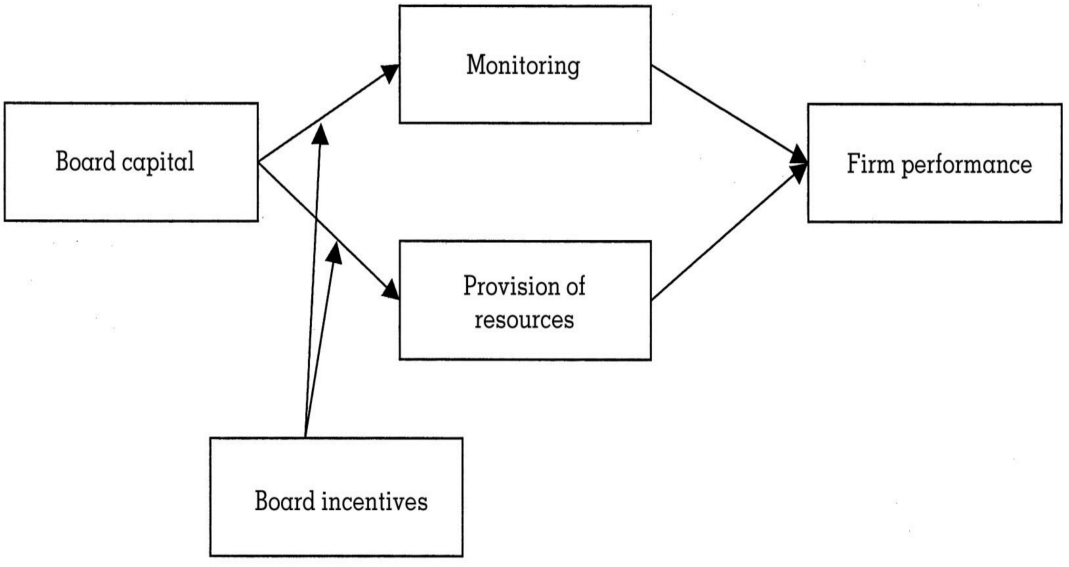

Figure 1.1: Hillman's and Dalziel's (2003) Integrated Model of Board Functions, Antecedents, and Firm Performance

Source: Hillman and Dalziel (2003)

This integrated model reflects more accurate understanding of actual board roles and overcomes unrealistic assumptions in the two most dominant perspectives based on agency theory and stewardship theory.[7] The agency theorists focus on "incentives to monitor while excluding the board's ability to monitor (i.e., board capital) ... [which in turn] prevents a more complete understanding of effective monitoring" (Hillman and Dalziel, 2003: 384). On the other hand, the inclusion of board's incentives in the model counts for the moderating role of incentives in encouraging directors to actively engage in the mentoring and service role.

Previous studies expanded Hillman's and Dalziel's model by incorporating other antecedents of board performance to their model's main antecedents (e.g. Ben-Amar, Francoeur, Hafsi, and Labelle, 2013; Minichilli et al., 2009). Similarly, in addition to board capital, this thesis focuses on other two antecedents of importance to both regulators and academics especially in the wake of the financial crisis, i.e. the board's diversity (incl. statutory, demographic, competitive) – and the board's time commitment (see Figure 1.2). The new expanded conceptual model is explored in the first empirical chapter (i.e. Chapter 3).

Chapters 4 and 5 further investigate directors' incentives by going beyond the directors' independence and compensation which are the two most prominent proxies for incentives in the literature. Specifically, they investigate the extent to which the employment market for director can incentivise directors to act in the shareholders' interest (see Figure 1.3). Fama and Jensen (1983) conjecture that "outside directors [NEDs] have incentives to develop reputations as experts in decision control.... they use their directorships to signal to internal and external markets for decision agents that they are experts" [p.315]. The employment market has the potential to offer an efficient incentive system for directors, especially in

[7]Noteworthy, some authors argue that the views of agency and stewardship theories are irreconcilable. For instance, stewardship theorists claim that directors' control role in fact may lower managers' intrinsic motivation to act in the shareholders' interests and further increases the chance of opportunism especially within those jurisdictions that are hard to control (Bammens et al., 2011). Furthermore, proponents of stewardship theory believe that board of directors composed of a majority of executive directors will deliver a better performance than those of a majority of NEDs (Kiel and Nicholson, 2003). In their view, inside executive directors work in line with shareholders' objectives and have a better understanding of their business compared to their outside counterparts (Davis et al., 1997)

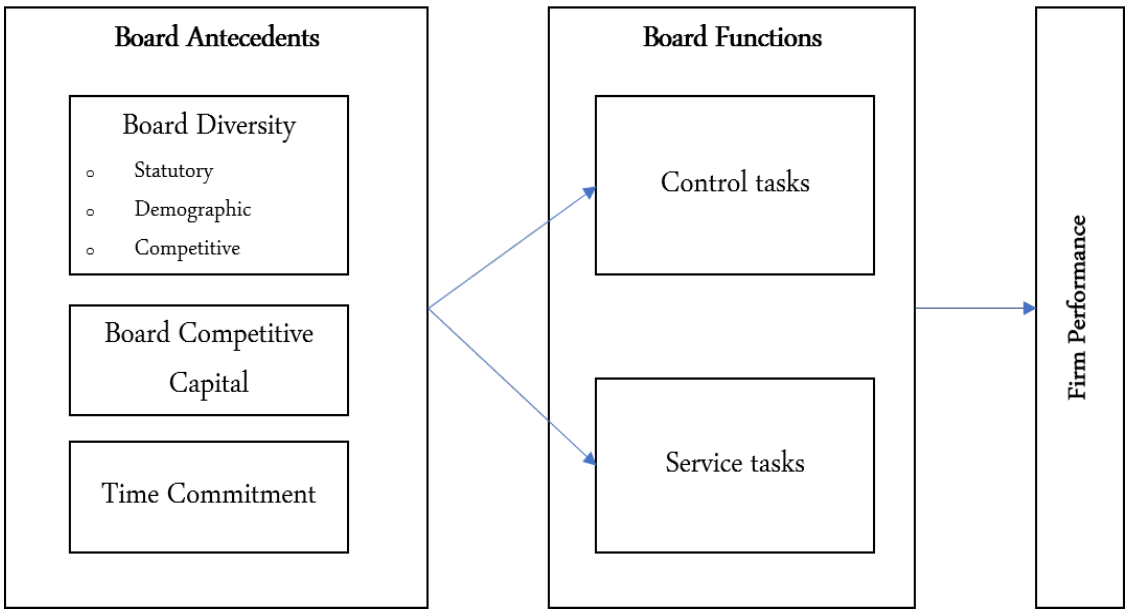

Figure 1.2: The Conceptual Model of the Relationships Between Board Antecedents and Firm Performance

the UK market where equity-based compensation is a restricted tool for NEDs' remunerations.

As depicted in Figure 1.3, the different market players, both internally (i.e. the home firm) and externally (i.e. other firms), will build a perception about NEDs' performance in their roles. Due to the difficulty in monitoring NEDs' actual performance in the boardroom, interested parties (e.g. shareholders and nomination committees) will rely on observable signals regarding NEDs' performance. Recent research has indicated that directors in general provide a signalling role especially "when stakeholders face significant information asymmetry. . . they [stakeholders] tend to judge the firms by using observable secondary information sources, including the demographic composition of board members" (Rhee and Lee, 2008: p.41; Sanders and Boivie, 2004).

On the other hand, it is in the NEDs' best interest to use these means to establish a good reputation in the employment market. According to signalling theory (Spence, 1973), signal observability, or how noticeable the signal is to the outsiders, is a main attribute of efficacious signals (Connelly, Certo, Ireland, and Reutzel, 2010) . Therefore, many researchers use NEDs' actions during irregular

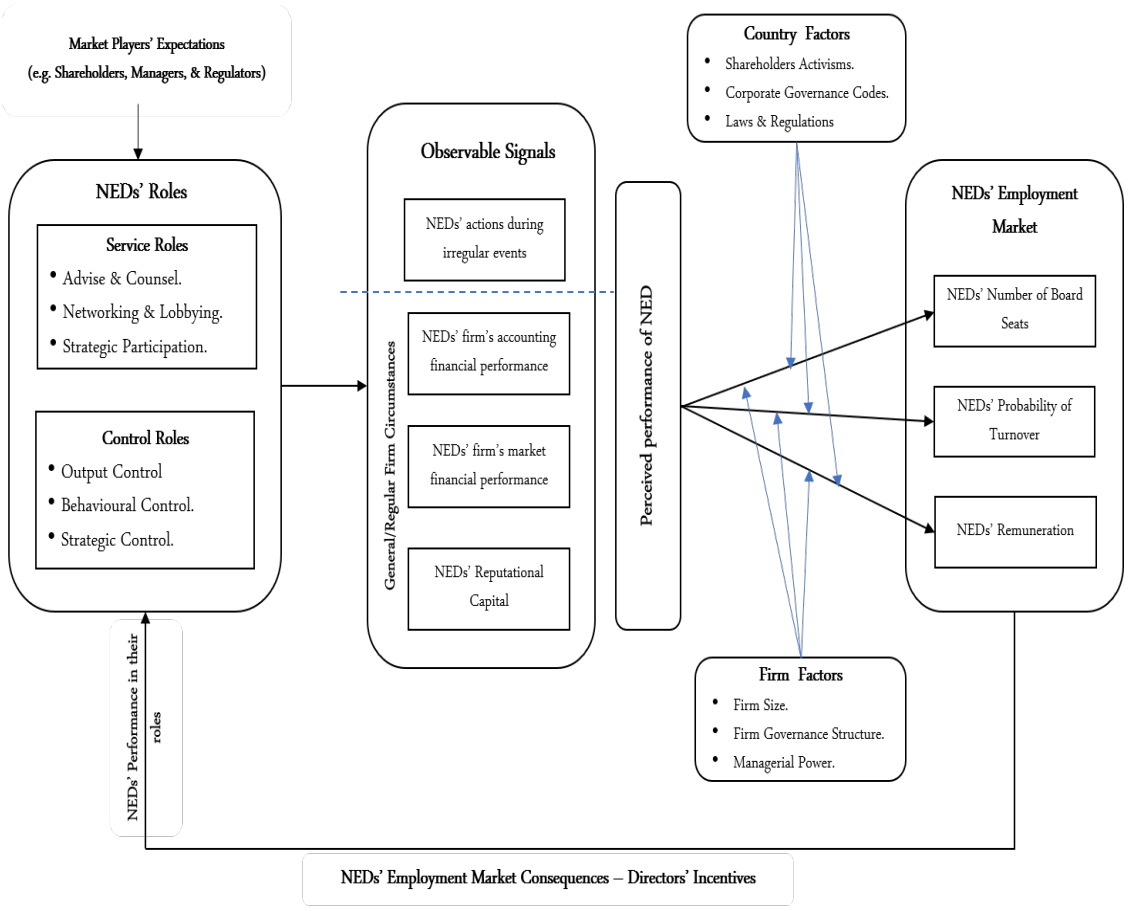

Figure 1.3: NEDs' Incentives: The Role of Directors' Employment Market

events faced by firms as an observable signal that shareholders and other interested parties may use to judge NEDs' performance. However, since most firms do not necessarily face such irregular circumstances, several authors (e.g. Ferris, Jagannathan, and Pritchard, 2003; Yermack, 2004) suggest that the financial performance of firms where NEDs' serves is an observable signal. In addition, NEDs' reputational capital (e.g. educational qualifications, experience, and social network) will be of a great importance to evaluate directors' performance in both their service and control roles. The latter signal, reputational capital, is exceptionally important when the market players perceive the main roles of NEDs as advisory in nature, and/or when NEDs are not held accountable for the firms' financial performance.

Based on all these signals, the interested parties in the market will build their perceptions about each director's performance which will affect their future career

path in terms of number of directorships, probability of re-election or turnover, and remuneration. The first two aspects are examined in Chapters 4 and 5, respectively. Specifically, Chapter 4 is concerned with NEDs' directorships and Chapter 5 examined NEDs' probability of turnover. Existence of such employment consequences on NEDs' perceived performance will incentivise them to act in these market players' interests or risk losing their current board seat and having less future directorships on other firms. The conceptual models are further elaborated in the respective chapters. The next section briefly discusses the research design.

1.5. Research Method and Design

Descriptive research aims "to portray an accurate profile of persons, events or situations" (Robson, 2002: 59). Descriptive research is usually an extension of exploratory research or a precursor to explanatory research. In the case of the later, the research is often termed 'descripto-explanatory' (Saunders, Lewis, and Thornhill, 2009). Based on the research objectives related to the first part of the study, the descripto-explanatory approach is more appropriate in exploring the antecedents of board roles performance in the UK listed firms over the last fifteen years. On the other hand, explanatory research was deemed most appropriate for examining the association between directors' firm financial performance and reputational capital on one hand, and their number of directorships and probability of turnover on the other hand.

1.5.1 Research Philosophy, and Approach

Guba and Lincoln (1994) state that "questions of method are secondary to questions of paradigm, which we define as the basic belief system or world view that guides the investigation, not only in choices of method but in ontologically and epistemologically fundamental ways (p.105)". Indeed, according to Saunders, Lewis, and Thornhill (2009), the discussion of research philosophy and approach comes before method in their research 'onion'. Philosophy is defined by the Oxford English Dictionary as a set or system of beliefs stemming from "the study of the

fundamental nature of knowledge, reality, and existence", which affect the research strategy and the choice of methods (Collis, J., and Hussey, 2013; Saunders et al., 2009).

Considering the nature of this research, the philosophy adopted is that of positivism. This study builds on previous studies and existing theories to develop the research hypotheses and test them using statistical methods to support or refute the developed hypotheses to further develop knowledge of the field. As far as research approach is concerned, this research adopts the deductive approach.

1.5.2 Research Sampling, Data Collection and Analysis Methods

The research population comprises all the UK public listed firms. The researcher uses large databases (i.e. BoardEx, Datastream) that cover firms listed during the sample period (i.e. 2000 to 2014). In Chapter 3, the analysis is conducted at the firms' level and directors' level. Hence, sampling units are the firms listed on LSE for at least two successive years and all NEDs sitting on the boards of these firms, mounting to 17,744 firm years and 66,368 NED years. In Chapters 4 and 5, the main unit of interest is specifically NEDs sitting on the UK listed banks and other financial institutions (BOFIs) over the period 2000-2014. A sample of 11,386 and 14,762 unique NED-year observations were selected from the population for the purpose of addressing research objectives five (Chapter 4) and six (Chapter 5), respectively. In conducting this research, various statistical methods have been used to analyse the data such as one-way ANOVAs, scheffe multiple group comparisons, multiple regression, poisson count regression, ordered logit, and logit regression. According to the research objectives and hypotheses, data was analysed utilising the appropriate statistical techniques using the STATA® package.

1.6. Thesis Contributions

1.6.1 Theory and Field

Firstly, since the separation between ownership and management (Berle and Means, 1932), the agency theory (Fama and Jensen, 1983) have dominated governance research and influenced scholars' understanding of NEDs' role. Over the last decade, there have been several calls for adopting a theoretical 'pluralism' rather than 'substitutional' in addressing the different roles of NEDs (Andrés-Alonso, Azofra-Palenzuela, and Romero-Merino, 2010; Bammens et al., 2011; Daily, Dalton, and Cannella, 2003; Hillman and Dalziel, 2003; Knockaert and Ucbasaran, 2013; Minichilli et al., 2009; Oh, Park, and Ghauri, 2013; Roberts et al., 2005; Segrestin and Hatchuel, 2011; Zattoni and Cuomo, 2010). The theoretical framework in this thesis adopts a pluralistic approach to NEDs' roles by acknowledging NEDs' competences and incentives as prerequisites for effective execution of their roles.

Secondly, this thesis contributes to the literature on antecedents of board task performance (Minichilli et al., 2009). The framework responds to calls for more empirical work on board capital (Tian et al., 2011) by examining not only the board human (i.e. experiences and qualifications) and social capital simultaneously, but also by incorporating the effect of board diversity and board time commitment. By doing so, this study, to the best knowledge of the researcher, is the first to empirically adopt such a holistic approach in examining antecedents of board effectiveness. It integrates studies in group dynamics, diversity, and board busyness with those on board capital. Thirdly, over the last decade, corporate governance literature witnessed publication of several important studies on board diversity. Most of these studies, however, focus on one aspect of diversity, especially statutory diversity and its effect on firm performance (Ben-Amar et al., 2013). In addition, the majority of research uses cross-sectional data, hence little is known about how boards' diversity has been affected over the years, especially with the introduction of several governance reforms after the crisis. To the best knowledge of the researcher, this is the first study to explore systematically the

three different components of board diversity (i.e. statutory, competitive, and demographic diversity) using a large dataset that covers the UK public listed firms over fifteen years (1999-2014).

Finally, compared to CEOs', the issue of NEDs' incentives is a relatively under-researched topic in corporate governance literature. This could be due to the assumption that NEDs do not have incentive problem. That is, some agency theorists believe that NEDs' status of 'independence' ensure that they would act in shareholders' interest, while stewardship theorists assume that NEDs are diligent stewards who actively work in shareholders' interest (Sharad and Steven, 2010; Shen, 2005). Therefore, this study sheds the light on the important issue of NEDs' incentives by examining another way of motivating NEDs to act in the market players' interest. Furthermore, most previous studies on NEDs employment market examine the employment market internally (i.e. turnover) and/or externally (i.e. directorships) following irregular or extraordinary business events, such as a takeover, stipulation of new laws, financial distress, fraud, etc. (Harford and Schonlau, 2013; Bugeja et al., 2009; Coles and Hoi, 2003; Gilson, 1990; Harford, 2003) that may signal NEDs' competency. Although most firms do not face extraordinary circumstances, similar research that examine the market consequences for NEDs' perceived performance under general business conditions has been scant and mostly in the US market (see for example, Ferris et al., 2003; Yermack, 2004).This study contributes to the literature in this area by investigating the role of directors' market in the UK, complementing the agency theory's perspective with other resource-based theories.

1.6.2 Practical Concerns

In the wake of the financial crisis, several commentators highlighted how the issue of directors' incompetence and their lack of expertise played a major role in the financial crisis. Regulators address some of these concerns in their post-crisis governance reforms (e.g. Walker Review, 2009; the Code, 2010; and Davis' Report, 2011). However, given the flexible "comply or explain" approach, what the boards of the UK firms practice (de facto) could be different than what the regulators

expect them to do (de jure). This thesis shows the extent to which some of those provisions have been adopted and how the targeted board's attributes have changed after the crisis. By doing so, this descriptive study could guide policy makers' future endeavours as they get an overall picture on how well the UK listed BOFIs have responded to those post- crisis reforms.

Furthermore, the issue of NEDs' incentives has often been neglected in corporate governance codes. In their review of the codes developed worldwide, Zattoni and Cuomo (2010) found that NEDs' "competencies and incentives are not considered a governance issue to be regulated in detail (p.64)". While equity-based compensation is used in the US to align the incentives of both EDs and NEDs with the shareholders', the UK regulators are sceptical on how effective this method could be as the UK Code discourages using equity-based schemes for NEDs' remuneration. In the absence of such regulations-based incentive system, the role of directors' employment market as market-based incentive system is very crucial.

Realising that directors' lack of incentives was among the main reasons behind the financial crisis (Parliamentary Commission on Banking Standards, 2013), UK policy makers have launched several reforms and amendments. Therefore, the findings of this thesis are of particular interest to regulators as it indicates how effective the UK market is in rewarding and disciplining NEDs. The existence of employment market consequences based on NEDs' perceived performance means that UK reforms (e.g. Stewardship Code (2010) and amendments to the UK Corporate Governance Code (2010) were in the right directions. On the other hand, the absence of such consequences invites regulators to explore new ways to increase shareholders activism, questions the suitability of reliance on NEDs, and/or finding an alternative road for incentivising NEDs.

1.7. Thesis Structure

The thesis comprises of six chapters. Figure 1.4 below provides a snapshot of the structure of the thesis.

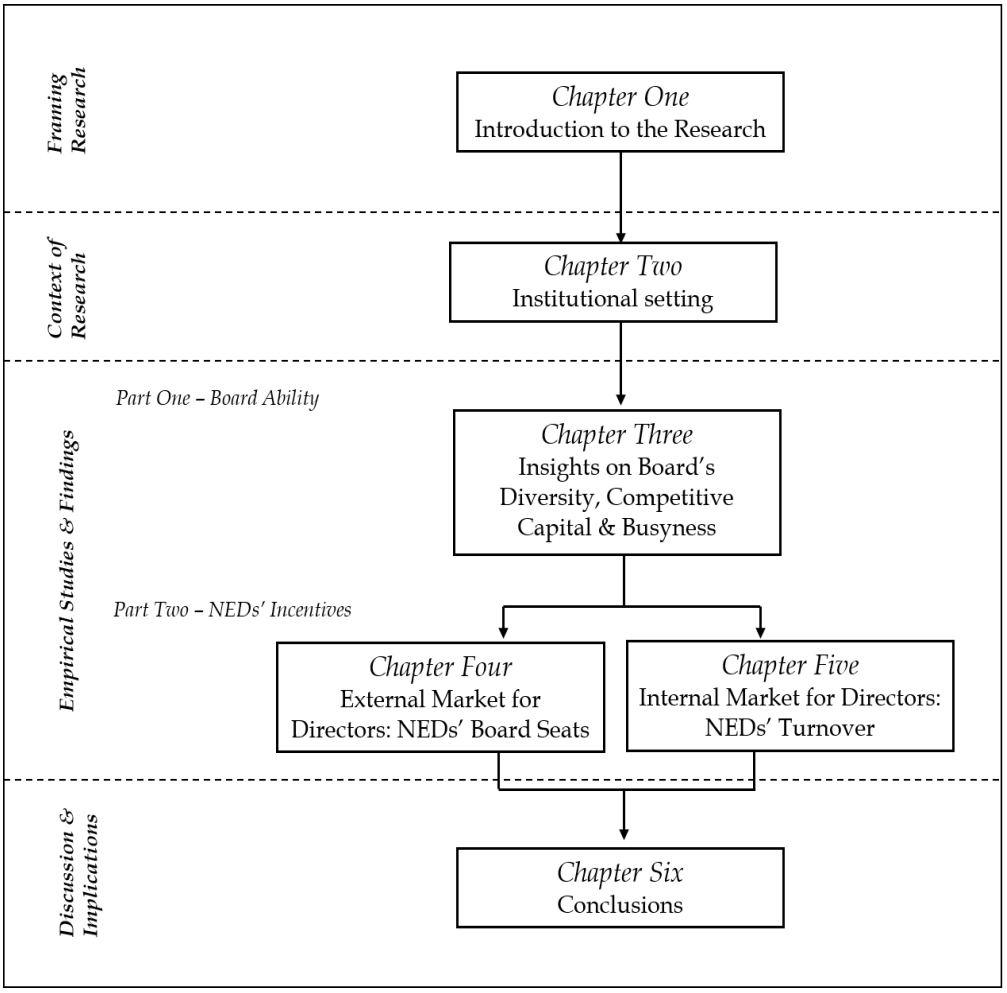

Figure 1.4: Structure of the Thesis

The next chapter provides a closer look at the UK institutional setting, featuring the UK corporate governance codes and the UK financial sector. The third chapter is a descripto-explanatory study to explore the antecedents of board roles performance in the UK listed firms over a period of fifteen years. Chapters 4 and 5 explore the efficiency of the UK market in disciplining or rewarding directors. Specifically, the fourth chapter examines the association between the number of board seats held by NEDs in the UK financial sector, and the performance of BOFIs that they are affiliated to and their reputational capital. Chapter 5 examines whether NEDs' turnover probability is associated with the performance of

their affiliated BOFIs, their reputational capital and their busyness. In addition to the empirical analysis, each chapter presents its respective literature review, data and research design, results, and discussion of the findings. The conclusion of the studies conducted in this thesis, recommendations, limitations and comments for further research are presented in Chapter 6.

Chapter 2

Institutional Setting

2.1. Introduction

This chapter explores the UK corporate governance environment as well as its financial sector as the context for this study. It is important to do so as most of the studies on employment market consequences for NEDs are in the US context which is considerably different than the UK in terms of the law mechanism being used, the provisions of the corporate governance codes promoted, and how active the shareholders are. Hence, understanding the UK context is vital for this study to ensure adequate customisation of some of the assumptions in previous literature. The benefit of studying other jurisdictions is to leverage their unique characteristics to add new insights and understandings based on the unique contextual features. Therefore, the second section of this chapter discusses the evolution of corporate governance codes in the UK, followed by a discussion of the current provisions in the UK corporate governance code with an emphasis on key provisions of particular interest for the purpose of this research.

Most studies hardly consider highly regulated industries such as the financial sector due to their particularities at several levels (e.g. regulatory, governance, boards' tasks, and media coverage). Since the last two empirical chapters focus on the financial sector in the UK, section four of this chapter discusses some of the particularities of this sector, especially those pertaining to NEDs. Sections five and six continue to discuss other aspects of the financial sector, highlighting how

directors in this vital sector affected the global financial crisis. Finally, discussion on the employment market for NEDs is presented in sections seven and eight.

2.2. The Evolution of Corporate Governance in the UK

Corporate governance is defined as "the system by which companies are directed and controlled" (FRC, 2014). In this system, shareholders are responsible for appointing the board of directors and the auditors of their companies. They are also expected to monitor the appointed boards of directors, who are directly responsible for the companies' governance, in order to ensure that an overall appropriate governance structure is in place (Cadbury, 1992).

The growing attention to corporate governance in the UK has been driven by a number of relatively recent catalysts. According to Mallin, Mullineux, and Wihlborg, (2005), there are three key drivers to the development of corporate governance in the UK: scandals of prominent business in both the financial and non-financial sectors (see Table 2.1); the development of global corporate governance practises driven by globalisation and cross-border investing, and the change to a more concentrated share ownership structure in the UK.[8]

The UK governance provisions have been developed over the years within a triangle-framework with the apexes being the recommendations of corporate governance codes, the representative bodies of institutional investors, and the London Stock Exchange (LSE) as the regulatory body (Mallin et al., 2005). Each one of these three apexes plays a different but complementary role in a way that promotes the endurance of corporate governance system in the UK. For instance, the UK 'comply or explain' approach ensures that governance codes have a flexible set of provisions and recommendations, which is based on both main and supporting principles. Since firms vary considerably, the board of directors may decide if

[8]The latest statistics on UK Share Ownership as at 31 December 2010 (2006), as produced by the Office for National Statistics (2012), highlight that institutional investors own around 83% (85%) of UK equity. That is, the insurance companies 9% (15%); pension funds 5% (13%); banks 2.5% (3%) unit trusts, investment trusts and other financial institutions together holding some 25% (14%); and overseas investors 41% (40%).

their firm would be better off following an alternative to a particular provision. In this case, the logic behind non-compliance have to be explained clearly in the listed firms' annual reports and accounts as required by the listing rules of LSE. Furthermore, the listing rules emphasise that statement on how board of directors complied with the code's main principles should be made in a manner that will enable shareholders to evaluate firms' compliance with these principles. Shareholders may or may not challenge board of directors' explanation for non-compliance after careful consideration of the firm's size, complexity, and its risks and challenges. The next section discusses the latest UK corporate governance code and highlights some of the main provisions that relates directly to the current research.

2.3. The Latest UK Corporate Governance Code

Since the publication of the first official governance code (i.e. Cadbury, 1992), there had been a number of codes developed over the last two decades (see Table 2.1). In this section, the latest published corporate governance code, The UK Corporate Governance Code (2014), discussed. Appendix A summarises all the code main principles, supporting principles, and provisions. Of particular interest for the purpose of the current study are the Code's recommendations regarding NEDs' nomination and appointment, NEDs' remunerations, and NEDs' evaluation (see Table 2.2).

2.3.1 NEDs' Nomination, Appointment and Removal

NEDs' appointment process is mainly managed by a nomination committee. The majority of nomination committee members should be independent NEDs and it can be chaired by the board chairman. The Code emphasises that two issues should be carefully considered when the nomination committee make recommendations to the board regarding NEDs' appointment, i.e., board diversity and balance of experience and skills. The appointed NEDs are then subject to election by shareholders at the first annual general meeting (AGM) after the appointment date. Before the AGM, sufficient biographical details should be given

Table 2.1
Corporate Scandals and Governance Codes in the UK

Scandals	Code	How Governance Failure Led to Reforms	Key Recommendations
Maxwell, Polly Peck, BC Holdings	(Cadbury, 1992)	Responding to the continuing fears concerning the power abuse prevalent in the Maxwell case, a corporate governance committee was set up in May 1991 by the Financial Reporting Council.	Three general areas were covered by the Cadbury; the board of directors; auditing; and the shareholders (Solomon & Solomon, 2007). - Majority of board directors should be independent NEDs. - At least three NEDs on the audit committee.- Majority of NEDs on the remuneration committee.
British Gas	(Greenbury, 1995)	Responding to concerns of public and shareholder about directors' remuneration, the Confederation of British Industry (CBI) established the Study Group on Directors' Remuneration to identify good practice in determining directors' remuneration and to prepare a code of practice for UK PLCs.	The aim was not necessarily to reduce directors' salaries, but to provide a means of establishing a balance between directors' salaries and their performance (Solomon & Solomon, 2007). - Remuneration committee should report directly to the shareholders by including details in the Annual Report and by the committee's chairman attending the AGM. - Limit directors' service contracts to one year's duration. - Ensure that directors' pay rates are 'sensitive' both within the company and outside.
Barings, a major UK bank.	(Hampel, 1998)	Responding to corporate and financial communities' concerns after significant UK corporate failures caused by the weak corporate governance structures, the Committee on Corporate Governance was established in November 1995 to review the Cadbury Committee's recommendations on corporate governance.	The Hampel Report emphasised avoiding a prescriptive or 'box-ticking' approach to CG, and redressed the balance between shareholders and stakeholders (Solomon & Solomon, 2007). - Companies should explain if the roles of Chairman and CEO are not to be separated. - Institutional shareholders should take a lead in exercising the power that their voting strength provides, and boards should enter a dialogue with such shareholders. - There should be a balance between executive and non-executive directors and no single group should dominate.
(The Combined Code On Corporate Governance FRC, 2003)		This code was aiming to combine previous views in order to reach a consensus on good corporate governance practices.	Two broad areas were covered. The first part dealt with companies (Directors; Directors' Remuneration; relations with Shareholders; and Accountability and Audit). The second part dealt with institutional shareholders (Shareholder Voting; Dialogue with Companies; and Evaluation of Governance Disclosures).
Enron, WorldCom, Tyco	(Higgs, 2003)	Responding to Enron fall and fears concerning corporate governance issues, Derek Higgs was appointed in April 2002 to lead an independent review of the role and effectiveness of NEDs.	The Report is concerned mainly with the role and effectiveness of non-executive directors, making recommendations for changes to the Combined Code (Solomon & Solomon, 2007). - A greater proportion of NEDs on boards and more apt remuneration for NEDs. - Establishing stronger links between non-executive directors and companies' principal shareholders.

Table 2.1 ***(Continued)***
Corporate Scandals and Governance Codes in the UK

Enron	(Smith, 2003)	Responding to another reason for Enron fall, which was the role and effectiveness of the audit committee.	The Report is concerned mainly with corporate audit committee affairs and relationship with external auditor (Solomon & Solomon, 2007). - Audit committees should be comprised solely of independent NEDs. - The audit committee should meet, at least annually, the external and internal auditors, without management, to discuss issues arising from the audit. - At least one member of the audit committee should have significant, recent and relevant financial experience.
Redraft of the Combined Code (2003)		In 2003, the Financial Reporting Council approved a new draft of the Combined Code. It was referred to as, "the biggest shake-up of boardroom culture in more than a decade" (Solomon & Solomon, 2007).	Revisiting executive remuneration issues to avoid excessive remuneration & encouraging the activism of shareholder in order to increase corporate accountability and transparency. - Ensure Board Independence, avoiding CEO-Chairman Roles Duality. - Institutional investors should avoid box ticking when assessing investee companies' corporate governance - NEDs can only continue after 9 years' service following annual re-elections. After that, director should not be described as independent. - Boards should not agree to a full-time executive director accepting more than one non-executive directorship, or chairmanship, in a Top 100 company.
Global Financial Crisis	(Walker, 2009)	Review corporate governance in UK banks in the light of the experience of critical loss and failure throughout the banking system [p.6]".	The Walker Review covered five main aspects of CG related to financial crisis; (1) Board size, composition and qualification; (2) Functioning of the board and evaluation of performance; (3) The role of institutional shareholders: communication and engagement; (4) Governance of risk; (5) Remuneration. - Ensuring that NEDs have the knowledge and understanding of the business to enable them to contribute effectively. - The chairman of a BOFI board should bring a combination of relevant financial industry experience and a track record of successful leadership capability in a significant board position. - Establishing a board risk committee separately from the audit committee. - The board risk committee (or board) risk report should be included as a separate report within the annual report and accounts. - The remuneration committee should seek advice from the board risk committee on specific risk adjustments to be applied to performance objectives set.

to the shareholders, along with a board statement showing why the proposed director was chosen. NEDs should be appointed for a specified term, subject to re-election at intervals of no more than three years, and no more than one year for those sitting on the FTSE 350 firms. When proposing re-election of a NED, the chairman needs to show the shareholders how effective and committed the director was, based on his/her formal performance evaluation.

NEDs are subject to statutory provisions related to the removal of a director. Due to the need to progressively refresh the board, a NED should stay no longer than six years on the boardroom. The decision to extend NED's stay after six years should be based on an annual rigorous review of his/her performance but the NED will lose his/her 'independence' status after serving on the board for more than nine years since the date of his or her first appointment.

2.3.2 NEDs' Remunerations

Management and executive directors' remuneration package should be designed and managed by a remuneration committee of at least three independent NEDs. Directors' remunerations can also be designed by independent remuneration consultants if the remuneration committee believes it is necessary to do so. On the other hand, the NEDs' remunerations should be decided by the board itself but the board may delegate this responsibility to a committee.

Regardless of whether the remuneration is for executive or non-executive directors, the chairman should ensure that major shareholders are being contacted and consulted. Although remuneration is a tool for attracting qualified directors and positioning the firm among its counterparts, the UK Corporate Governance Code encourages the remuneration committee to avoid high remuneration levels with no corresponding improvement in performance.

Overall, the code highlights three main issues regarding the remuneration level. Firstly, equality should be maintained in directors' remuneration levels meaning that it should be "sensitive to pay and employment conditions elsewhere in the group". Secondly and most importantly, NEDs' remunerations should reflect

the required time commitment and NEDs' role responsibilities. Finally, NEDs' remunerations package should not include performance-related elements (e.g. share options) as this jeopardises NEDs' independence, unless shareholders' approval is granted in advance.

2.3.3 NEDs' Evaluation

According to the UK Corporate Governance Code, NEDs' evaluation should be the starting point for NEDs' appointment, removal, and remuneration processes. Evaluation process should be done at the individual (NED) level and group (board of directors) level.

At the board level, the balance of skills, experience, independence and knowledge of the company's board need to be evaluated. In addition, the evaluation process should also consider board diversity and the way the board works together as a unit. However, the board level evaluation seems to be only linked to NEDs' appointment and removal. For instance, evaluation is being conducted to figure out the competencies that are redundant and the ones that should be acquired through directors' appointment. The Code, however, does not tie board level evaluation to NED's remuneration. Thus, NEDs' relative individual importance to the board in terms of their personal competencies is not associated with their remuneration.

At the individual level, the evaluation of directors is suggested to be designed in a way that shows the director's contribution and commitment to the role, which is operationalised in the provisions by the time devoted to the board (e.g. frequency meetings' attendance). Hence, NEDs' individual evaluation in terms of time commitment and responsibilities of the role is encouraged to be linked to their remuneration and turnover.

The Code does not identify any specific role for shareholders regarding directors' or boards' performance evaluation. However, shareholders are expected to approve directors' remunerations as set by the board and also to participate in NEDs' annual re-election (or three years re-election for non – FTSE350) as proposed by the board. Finally, the Code encourages firms to disclose how the

Table 2.2
Summary of the UK Code's (2014) Main Principles and Provisions Related to Board Composition

The Main Principles		Code Provisions and supporting principles
B.1) The Composition of the Board	Appropriate balance of skills, experience, independence and knowledge of the company to ensure effective discharge of board's responsibilities.	**The Supporting Principles** — Ensure sufficient board size to meet business requirements and to avoid disruption if changes to the board's composition need to be made. — Ensure appropriate combination of executive and independent NEDs, hence, decision taking is not dominated by a small group. — When appointing chairman and committees' members, board should ensure that membership is refreshed, and avoid undue reliance on particular directors. — Only committee members is entitled to be present at a meeting of the three committees. However, the committee can invite others to attend. **The Code Provisions** — Company's annual report should show the "independence" statues for each NED. At least half of listed companies' boards, except for smaller companies, should be comprised of independent NEDs. Small firms' boards should have at least two independent NEDs.
B.2) Appointments to the Board	Directors' appointment procedure should be formal, rigorous and transparent.	**The Supporting Principles** — The appointments should be made on merit, while ensuring board diversity, including gender. — Board should ensure having appointments plans for orderly succession to the board and to senior management. These plans should maintain board diversity and balance of skills and experience. **The Code Provisions** — The process for board appointments should led by nomination committee, which make recommendations to the board as well. The nomination committee should *"make available its terms of reference, explaining its role and the authority delegated to it by the board"* — The nomination committee should be dominated by independent NEDs. The chairman or an independent NED should chair the committee. — A careful evaluation of board diversity of skills, experience, independence and knowledge is a crucial prerequisite for preparing a description of the capabilities required for a particular appointment. — NEDs should be appointed *"for specified terms subject to re-election and to statutory provisions relating to the removal of a director"*. If a NED is to continue for more than six years, a rigorous review should be undertaken with due regard for the need for progressive refreshing of the board. — The nominations issues should be addressed in a separate section of firm annual report. That include the work of committee, the used appointments process, board's policy on diversity, and progress on achieving the objectives. — The choice of using open advertising or external search consultancy for directors' appointment should be explained in the annual report and *"a statement made as to whether it has any other connection with the company"*.

Table 2.2 ***(Continued)***
Summary of the UK Code's (2014) main principles and provisions related to board composition

B.3) Commitment	Directors should commit sufficient time to the company.	**The Code Provisions** — Nomination committee is responsible for preparing a job specification for the chairman post. It should include the time commitment expected, and the need for availability in the event of crises. On the other hand, chairman should disclose all significant commitments he/she has before appointment and included in the annual report. Changes to such commitments should be reported in the next annual report. — The letter of appointment should state the expected time commitment. NEDs should express their ability to meet these expectations while disclosing all significant commitments he/she has before appointment. — The board *"should not agree to a full time executive director taking on more than one non-executive directorship in a FTSE 100 company nor the chairmanship of such a company"*
B.6) Evaluation	A formal and rigorous evaluation of the board performance should be undertaken annually	**The Supporting Principles** — Evaluation of the board should consider all factors relevant to its effectiveness, including (A) The balance of skills, experience, independence and knowledge of the company. (B) Board diversity, including gender. (C) How the board works together as a unit. — This evaluation should be used by the chairman to decide on directors' appointment, removal, and the training programs. — Evaluation of directors should be designed to show director's contribution and commitment to the role (incl. devoted time). **The Code Provisions** — The way the performance evaluation has been conducted should be disclosed in the annual report. — For FTSE 350 firms, evaluation of the board should be conducted externally at least every three years. The annual report should clearly identify the external facilitator and their connection with the firm, if any. — Performance evaluation of the chairman should be conducted by NEDs and led by the senior independent director. Executive directors' views need to be taken into account in chairman's review.
B.7) Re-election	All directors should be submitted for re-election at regular intervals	**The Code Provisions** — For FTSE 350 firms, all directors should be subject to annual election by shareholders. — *"All other directors should be subject to election by shareholders at the first annual general meeting after their appointment, and to re-election thereafter at intervals of no more than three years".* — NEDs who have served longer than nine years should be subject to annual re-election. Sufficient biographical details should be disclosed to ensure an informed decision by shareholders. — When appointing a NED, the board need to show shareholders, in writing, why they believe he/she should be elected. — When proposing re-election for NED, the chairman should confirm to shareholders that based on formal performance evaluation, this NED continues to be effective and to demonstrate commitment to the role.

"annual" and "internal" performance evaluation has been conducted in the annual reports. For FTSE 350 firms, board's performance evaluation process should be carried out externally at least once every three years.

2.4. Directors in the UK Regulated Financial Sector

In the UK, firms in the financial sector are regulated by a body formerly known as the Financial Services Authority (FSA), which has now become two separate regulatory authorities: The Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA). The FCA aims to secure the appropriate degree of protection for consumers and to protect and enhance the integrity of the UK financial system. The PRA, on the other hand, is part of the Bank of England and is responsible for the prudential regulation supervision of financial institutions at the individual level of the firm (Financial Services Authority, 2000).[9] In 2000, the Financial Services and Markets Act proposed a statutory regime known as the Approved Persons Regime, that regulate and approve certain individuals, including NEDs, who are working for authorised firms. In June 2013, a new regime, known as the Senior Managers and Certification Regime (SM&CR), has been introduced to overcome the deficits in the old regime.

2.4.1 Approved Persons Regime

Under the Financial Services and Markets Act (2000), PRA and FCA have certain powers over financial firms' NEDs because they fall under the category of 'approved persons', who perform 'controlled functions' (e.g. for directors, governing functions) and have significant influence over the regulatory conduct of a financial firm's affairs.

NEDs in regulated firms must first get regulatory approval before performing any of their governing functions. Specifically, they have to meet the rules of

[9]Specifically, the PRA's general objective is to promote the safety and soundness of PRA authorised persons.

'fit and proper test', comply with the 'Statements of Principle and the Code of Practice', and report anything that could affect their ongoing accountability to the Authority and/or the regulated firm. PRA and FCA can take disciplinary actions (e.g. fines, suspensions of approval, and imposing restriction) against NEDs who do not comply with the rules for "controlled functions" and/or knowingly breach their regulated firm's rules.

2.4.2 The New Accountability Regime (Senior Managers and Certification Regime)

In 2013, the UK Parliament appointed the "Parliamentary Commission on Banking Standards" (PCBS) to report on professional standards and culture of the UK banking sector. In the report entitled "Changing banking for good", the Commission made several proposals aimed at restoring trust in banking. The proposal covers five themes: improving personal responsibility, especially at senior levels, through a new accountability regime (SM&CR); improving bank's responsibility for its own safety and soundness; empowering consumers and provide greater discipline on banks; empowering regulators by reinforcing their responsibilities "in the exercise of judgement in deploying their current and proposed new powers"; and finally, specifying the responsibilities of the Government and Parliaments (Parliamentary Commission on Banking Standards, 2013). Of particular interest for this study is the new accountability regime. The Parliamentary Commission on Banking Standards (2013, p.8) described one of the major problems in the financial sector is having too many bankers, especially at the most senior levels, operating in an environment

> "with insufficient personal responsibility. Top bankers dodged accountability for failings on their watch by claiming ignorance or hiding behind collective decision-making. They then faced little realistic prospect of financial penalties or more serious sanctions that commensurate with the severity of the failures with which they were associated. Individual incentives have not been consistent with high collective standards, often the opposite [....] The Approved Persons Regime has created a

> largely illusory impression of regulatory control over individuals, while meaningful responsibilities were not in practice attributed to anyone."

To overcome the shortfalls of the Approved Persons Regime, the PCBS proposes the 'Senior Managers Regime' alongside the 'Certification Regime'. In addition, PCBS suggests several amendments to the Financial Services and Markets Act in order to facilitate the enforcement action by the regulators if the rules of conduct, as presented in Table 2.3, were breached.

Table 2.3
Rules of Conduct by FCA and PRA

Source: FCA's Handbook of rules and guidance, the Code of Conduct sourcebook (COCON)		
First tier — Individual conduct rules		
FCA	PRA	Rule 1: You must act with integrity. Rule 2: You must act with due skill, care and diligence. Rule 3: You must be open and cooperative with the FCA, the PRA and other regulators. Rule 4: You must pay due regard to the interests of customers and treat them fairly. Rule 5: You must observe proper standards of market conduct.
Second tier — Senior management conduct rules		
FCA	PRA	SM1: You must take reasonable steps to ensure that the business of the firm for which you are responsible is controlled effectively. SM2: You must take reasonable steps to ensure that the business of the firm for which you are responsible complies with relevant requirements and standards of the regulatory system. SM3: You must take reasonable steps to ensure that any delegation of your responsibilities is to an appropriate person and that you oversee the discharge of the delegated responsibility effectively. SM4: You must disclose appropriately any information of which the FCA or PRA would reasonably expect notice.

The purpose of the Senior Managers Regime is to ensure that individuals at the senior level are fully aware and accountable for their assigned responsibilities as proposed by PRA and FCA under 'prescribed responsibilities' (see Table 2.4). The regime also applies to the previous 'approved persons' in the old regime. Hence, it applies to all NEDs in regulated firms' boards who are seen as 'managers'.[10] In the new regime, NEDs may face potential criminal liability under a new offence for decisions causing a financial firm to fail. The Licensing Regime or Certification

[10]In Financial Services and Markets Act, "managing" is defined as decision taking or participating in the taking of decisions that affect the way a regulated firm is being run.

Regime is proposed to apply to other regulated firms' employees who perform significant harm functions (i.e. certification functions) (Prudential Regulation Authority, 2015). However, individuals falling under this category do not need to get a direct approval by regulators. It is instead the firm's responsibility to ensure that certification functions are undertaken by individuals certified as fit and proper. Firms must renew the certification annually (Prudential Regulation Authority, 2015).

2.5. Evolution of the Financial Sector in the UK

The financial sector provides three essential services to the modern economy: payment services, intermediation between savers and borrowers, and insurance against risk. Payment services include the provision of bank accounts and services that support settlement of payments between different parties. Intermediation services involve pooling individual savings into deposit accounts, pension funds or mutual funds, which in turn are used to fund different parties. Finally, risk transferring services are provided to hedge various types of risk (e.g., exchange rate risk, liquidity risk) via financial instruments such as deposit accounts, securitisation, derivatives and other insurance contracts (Davies and Richardson, 2010).

The UK financial sector underwent major structural changes over the last few decades. Firstly, the increasing competition within the financial sector which was triggered by the Competition and Credit Control introduced by the Bank of England in 1971 and the Banking Act introduced in 1979 (Davies and Richardson, 2010; Drake, 2001).[11] Secondly, the deregulation in 1986 and the 'Big Bang' encouraged clearing banks to diversify into new activities such as investment and insurance, and to enter the mortgage market.[12]

[11]The deregulations include, for instance, the end collusion on interest rates, widening the scope of banks' activities, and relaxing the capital requirement.

[12]The "Big Bang" refers to a series of reforms aimed for the elimination of any anti-competitive practices at the LSE and the internationalisation of London's financial markets.

Table 2.4
Prescribed Responsibilities by PRA and/or FCA

Source: Senior Managers Regime, Statement of Responsibilities as published by Bank of England.

	Senior Managers Responsibilities
1	Performance by the firm of its obligations under the senior management regime, including implementation and oversight
2	Performance by the firm of its obligations under the Certification Rules
3	Compliance with the rules relating to the firm's management responsibilities map
4	The induction, training and professional development of all persons performing senior management functions on behalf of the firm and all members of the firm's management body
5	Ensuring and overseeing the integrity and independence of the internal audit function in accordance with SYSC 6.2 (Internal audit)
6	Ensuring and overseeing the integrity and independence of the compliance function in accordance with SYSC 6.1 (Compliance)
7	Ensuring and overseeing the integrity and independence of the risk function in accordance with SYSC 7.1.22 R (Risk control)
8	Ensuring and overseeing the integrity, independence and effectiveness of the firm's policies and procedures on whistleblowing and for ensuring staff who raise concerns are protected from detrimental treatment
9	Allocation of all prescribed responsibilities
10	Leading the development of the firm's culture and standards in relation to the carrying on of its business and the behaviours of its staff
11	Embedding the firm's culture and standards in relation to the carrying on of its business and the behaviours of its staff in the day-to-day management of the firm
12	The development and maintenance of the firm's business model
13	Management of the allocation and maintenance of capital, funding and liquidity
14	The firm's treasury management functions
15	The production and integrity of the firm's financial information and its regulatory reporting in respect of its regulated activities
16	The firm's recovery plan and resolution pack and overseeing the internal processes regarding their governance
17	If the firm carries out proprietary trading, the firm's proprietary trading activities
18	If the firm does not have an individual performing the Chief Risk function, overseeing and demonstrating that the risk management policies and procedures which the firm has adopted in accordance with SYSC 7.1.2 R to SYSC 7.1.5 R satisfy the requirements of those rules and are consistently effective in accordance with SYSC 4.1.1R
19	If the firm outsources its internal audit function, taking reasonable steps to ensure that every person involved in the performance of the service is independent from the persons who perform external audit, including (A) supervision and management of the work of outsourced internal auditors and (B) management of potential conflicts of interest between the provision of external audit and internal audit services
20	If the firm does not have a person who performs the Senior Independent Director function, (A) carrying out oversight of the person who performs the Chairman function; and (B) oversight of the adequacy and quality of the resources available to the office of that person to enable the role to be fulfilled within the firm

Also, the UK market witnessed demutualisation of building societies and their diversification into banking services, unsecured loans, credit cards, life and general insurance, mutual funds, etc. (Davies and Richardson, 2010; Drake, 2001;

Kosmidou and Pasiouras, 2006). Thirdly, the emergence of internationally agreed prudential regulation (Basel I (1988) and Basel II (2004)) pushed banks to grow even bigger by raising their fixed cost in meeting capital requirement and reporting (Davies and Richardson, 2010).

Competition, deregulation, and globalisation enabled financial institutions to pursue efficiencies through functional (economy of scope) and geographical expansion (economy of scale) in order to remain competitive in international markets (Kosmidou and Pasiouras, 2006). Unsurprisingly, despite having more than 300 licensed banks and building societies in the UK, the provision of banking services is highly concentrated.[13] Figure 2.1 and Figure 2.2 show some of the financial sub-sectors scaled by the size of their balance sheet and concentrations within these sub-sectors, respectively. All firms in figure 2.1 provides all the main services of financial system where different types of banks are grouped in the blue section of the figure and other non-financial firms (NFFs) are grouped in the purple section. Due to their central role in the financial system, Bank of England and central counterparties (CCPs) are represented separately in the centre of the figure. Figure 2.2 illustrates the level of concentration in the UK different financial sectors where the five darkest shades of black are used to represent the largest five entities in each sectors based on the size of the balance sheets (e.g. the biggest five life insurance companies account for half of that sector).

2.6. Performance of the Financial Sector During the Financial Crisis

2.6.1 Measuring Performance in the Financial Sector

Although there has been global convergence in financial sector's regulations, the regulatory and institutional systems still vary from country to country, which in turn affects the performance measurement structure of banks in each country

[13] Six banks together account for almost 80% of the stock of UK customer lending and deposits (Davies and Richardson, 2010).

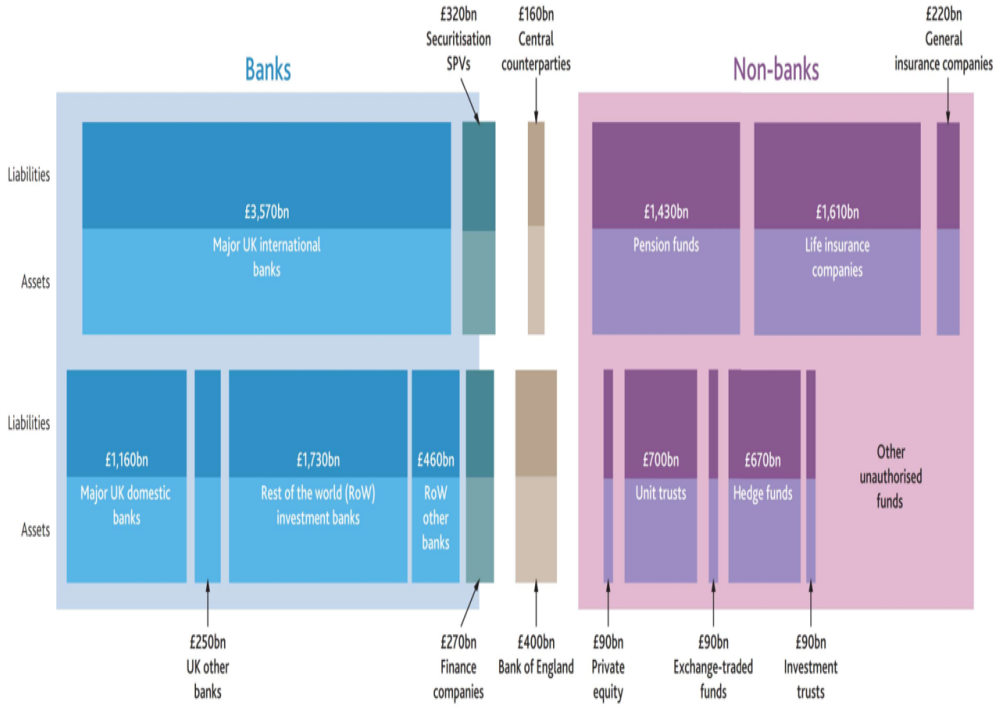

Figure 2.1: A Map of the UK Financial System

Source: Bank of England Quarterly Bulletin (2015, p. 114)

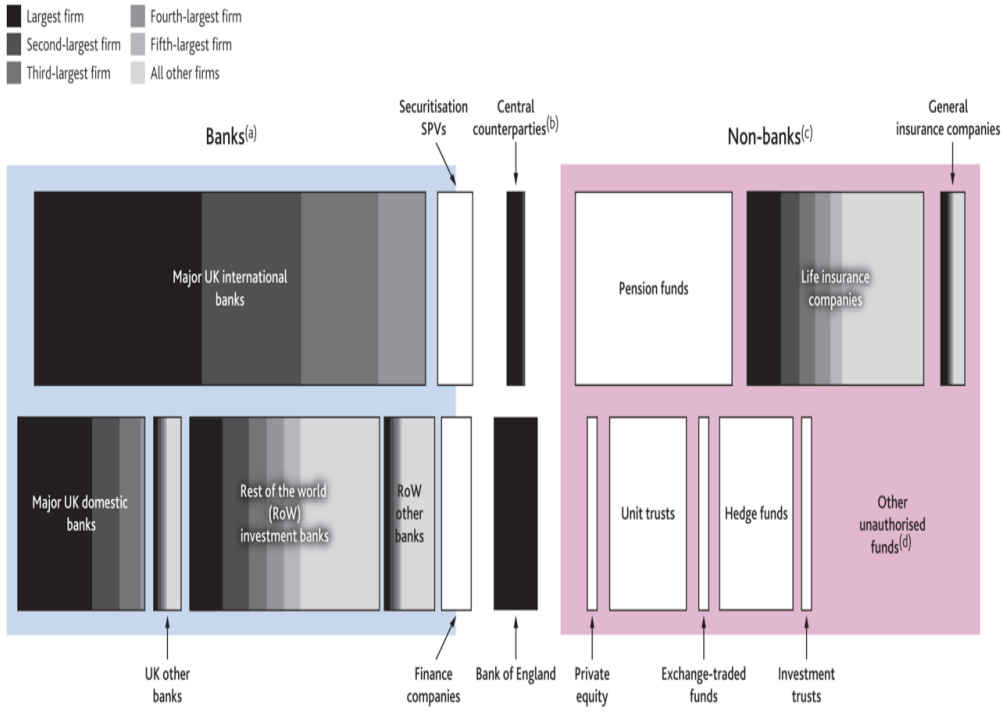

Figure 2.2: Concentration Within Sectors: Highlighting the Size of the Five Largest Firms

Source: Bank of England Quarterly Bulletin (2015, p. 121)

(Michael and Tobi, 2014). Performance of the banking industry can be assessed using a wide range of interrelated tools such as financial ratios, economic value added (EVA), performance dashboards, customer-based measures, risk measures, and the balanced score card (Michael and Tobi, 2014). A recent survey of the UK banks indicates financial ratios and the Balanced Score Card being the most common performance measurement systems, with no significant relationship between adopted measures in the UK banks and their characteristics (e.g. age, ownership structure, market position) (Michael and Tobi, 2014).

Academics' attempts to investigate the efficiency characteristics of financial institutions have been challenged by the difficulties arising from the intangible nature of services/products provided in the financial sector. Hence, financial institutions' outputs, costs, and performance are the most used measures of productivity in academic research.[14] For instance, Kosmidou and Pasiouras (2006) used thirteen financial ratios (e.g. equity/total assets; equity/liabilities; net interest margin; other operating income/average assets; return on average assets) to cover different aspects of banks' performance operating in the UK (e.g. profitability; liquidity; capital adequacy; and asset quality). They found that small banks in the UK exhibit higher overall performance compared to large ones over the period 1998-2002. Similarly, Drake's (2001) study found that increasing returns to scale are evident for smaller banks compared to decreasing returns to scale in the "big 4" UK clearing banks throughout the sample period 1984 to 1995.

2.6.2 Corporate Governance and Performance of the Financial Sector in the Global Financial Crisis

A number of macroeconomic factors have led to the freeze of the global credit markets in 2007-2008 following the collapse of a large number of financial institutions. The deregulation in the financial sector during the 20th century resulted in a connected network of greatly leveraged and functionally expanded financial institutions and intermediaries. Consequently, the financial market witnessed the

[14]For instance, interest margin, indexes of profitability, pricing of bank services and loan market share. However, these measures are not necessary used for evaluation in the financial market.

emergence of "too important to fail" institutions which are subject to less market discipline, a status that may have altered their private incentives (Davies and Richardson, 2010). However, macroeconomic factors were not the only drivers of the financial crisis as some firms were affected much more than others. The variation in firms' exposures to the financial crisis were referred to as firm-level factors such as risk management and financing policies (Erkens et al., 2012). Several recent studies have investigated how firms' corporate governance affect their performance during the financial crisis and Table 2.5 presents a summary of reviews of such studies.

Fahlenbrach and Stulz (2011) challenged the argument that CEOs' lack of interest was the fundamental cause for the crisis. Specifically, they questioned the assumption that CEOs' compensation should have been sufficiently linked to long-term performance and for shareholders to be given more voice (e.g. via the adoption of "say on pay"). Hence, they examined whether the alignment of interest between CEOs and shareholders led to better performance during the financial crisis. Neither short-term incentives nor equity incentives were found to have a negative association with banks' performance in the US during the financial crisis.[15] Furthermore, Fahlenbrach and Stulz (2011) found some evidence suggesting exactly the opposite, i.e. CEOs with better-aligned compensation structure performed worse during the financial crisis. A possible explanation is that CEOs with better incentives were actually trying to maximise shareholders' wealth by taking "excessive" risk. Ex-post, their choices may have ended up with unexpected poor outcomes. Such poor outcomes do not necessarily mean that CEOs were not acting in their shareholders' interest as they themselves suffered huge losses.

Similarly, Beltratti and Stulz (2012) found that banks with more shareholder friendly boards generally performed worse during the crisis. However, the argument that banks were actually pursuing investment opportunities which were favoured by shareholder before the crisis, unexpectedly turned into great losses still

[15]Short-term incentives measured by the "Cash bonus/salary", which is the dollar amount of the annual bonus for 2006 performance paid in cash divided by the cash salary. Equity incentives are measured by two measures; (1) the sensitivity of the value of the CEO's equity portfolio to change in the stock price, (2) CEO's ownership is (all shares + delta-weighted options held by the CEO)/ the total number of shares outstanding ".

Table 2.5
Summary of the Studies on Determinants of Financial Sector Performance during the financial crisis

Author(s)	Dependent Variable(s)	Main Independent Variables	Control Variables	Sample	Main Findings
(Aebi et al., 2012)	*Bank Performance:* • Buy & Hold Returns over the period July 2007 to Dec 2008. • Accounting; ROE & ROA.	*Risk management:* • Dummy for CRO in executive board • Dummy for Risk committee.	• *The firm characteristics:* Market-to-book ratio, Size, Tier 1 capital ratio, Deposits/assets, Loans/assets, Income diversity, Lagged Perf Var. • *Board characteristics:* Board size, Board independence, Percentage of directors with finance background, Institutional shareholdings.	• 372 U.S. Banks. • Cross Sectional Study.	• Banks with risk governance in general perform significantly better during the crisis. • No significant relation between the G Index, CEO ownership, and a bank's performance during the financial crisis.
(Erkens et al., 2012)	*Bank Long-Run Performance:* • Buy & Hold Returns over the period Jan 2007- Sept 2008 • Accounting Write-down.	• *Board independence* (Percentage of NEDs). • *Institutional Ownership* (Percentage of shares owned by institutional investors). • *Presence of Large Shareholders:* (Dummy for a large owner with voting rights $>$ 10 percentage, measured as of Dec 2006).	Leverage, Firm size, Stock return in 2006, Industry indicator, Country indicator.	• 296 International Banks (17 UK banks). • Cross Sectional Study.	• Banks with more independent boards and greater institutional ownership experienced worse stock returns during the financial crisis. • On the country level, no significant relation found between firm performance and legal institutions quality or the existence of shareholder-protection rights
(Beltratti & Stulz, 2012)	*Bank Long-Run Performance:* Buy & Hold Returns over the period July 2007 to Dec 2008.	• *Bank characteristics:* Capital Ratios (Tier 1, Tangible equity), Liabilities Composition (Deposits, Funding fragility), Asset Composition (Loans, Liquid assets, Other earning assets), Diversified Activities (Income diversity, Non-interest), Bank's idiosyncratic volatility (Log Z, Beta, Real estate beta), State (if the state owns $>$ 10% of a bank), • *Corporate governance:* Ownership (level of ultimate ownership of the largest shareholder), Board (index for whether the board is shareholder-friendly in 2006 collected by (ISS)).	• *Macroeconomic variables:* Log GDP, Current account, Concentration. • *Regulation and institution:* Official, Capital, Restrict, Private monitoring, Deposit insurance, Institution, State, ADRI. • *Stock returns: in 2006, July 2007-Dec 2008.*	• 96 International banks (9 UK banks). • Cross Sectional Study.	Banks with more shareholder friendly boards generally performed worse during the crisis.

Table 2.5 ***(Continued)***
Summary of the Studies on Determinants of Financial Sector Performance during the financial crisis

(Fahlenbrach & Stulz, 2011)	*Bank Long-RunPerformance:* • Market-based: Buy & Hold Returns. • Accounting; ROA, and ROE.	• *CEO Incentives:* Cash bonus/salary, Dollar gain from +1%change in the stock price, Log of Percentage Ownership. • *The Equity Risk Exposure:* Dollar equity risk sensitivity, Log of Percentage equity risk sensitivity.	• *The firm characteristics;* Stock Return in 2006, Book-to-market Ratio, Log of the market capitalisation, and the Tier 1 capital ratio (all measured at the end of year 2006).	• 77 U.S. banks. • Cross Sectional Study.	Neither short-term incentives nor the equity incentives of CEO were found to have a negative association with banks' performance in the U.S. during the financial crisis.
(Minton et al., 2011)	*Bank Performance:28* • Market-based: the nominal cumulative stock return from Jan 2007 to Dec 2008. • Accounting; Tobin's Q.	• *Board independence.* • *Percentage of Financial expert among independent directors.*	• *The firm characteristics;* Firm Size, Equity capital ratio, Stock return in 2006, Total loans, Deposits, Real estate loans, Short-term financing, Off -balance sheet. • *Board characteristics:* Board Size, Dummy for CRO, Dummy for Risk Committee.	Public tradedcommer-cialbanksand S&Ls inthe US, 182-119 banks in2003 to 2008	Financial expertise of the board was positively related to ex-ante bank performance, but was negatively related to ex-post performance in the crisis.
(Cornett et al., 2009)	*Bank Performance:* • Market-based: Buy & Hold Returns each year. • Accounting; e.g. Real estate loans over total loans; Non-interest expense over non-interest income.	• *Board independence, Friendly nominating comm. (% of NEDs),* • *Ownership of each directors' group; Inside, Outside, Aliated30.* • *CEO Pay-for Performance Sensitivity.* • *Number of board meetings,* • *Dummy for CEO/Chair duality.* • *Dummy for Golden parachutes.*	Firm Size — four categories of total assets; • TA between \$3b. & \$10b. • \$1b. & \$3b.; • \$500m. & \$1b.; • TA $<$ \$500m.	All Public traded BHCs inthe US, 419-302 banks in 2003-2008	A less independent board, pay-for-performance insensitivity, a decrease in insider ownership, CEO role duality, and CEO-friendly nominating committees are all associated with a decline in the stock performance during the financial crisis.

holds here as well. This argument is supported by the negative relation between ex-ante and ex-post banks' performance. Beltratti and Stulz (2012) explored other hypotheses for banks' poor performance during the global financial crisis as well. Specifically, they found that banks financed by short-term funds, have less deposits and more funding fragility tend to perform worse during the financial crisis period. In addition, although results did not show that stronger regulation systematically led to better performance during the crisis, some evidence indicated that banks from more restricted countries did better during the crisis.

Erkens et al. (2012) found that banks with more independent boards and greater institutional ownership (i.e. greater external monitoring) experienced worse stock returns during the financial crisis. However, consistent with Beltratti and Stulz (2012) and Fahlenbrach and Stulz (2011), their result showed that only banks with greater institutional ownership and not independent boards, took more risk before the financial crisis. Again, this supports the hypothesis that banks were actually following investors' interests when they took this risk ex-ante. On the other hand, a possible explanation for the negative relation between independent boards and stock return during the crisis is that these boards raised equity capital to avoid bankruptcy risk. Indeed, Erkens et al. (2012) found banks that raised more equity capital had a greater chance to survive during the financial crisis (i.e. less chance to be delisted). Regarding country-level governance, consistent with Beltratti and Stulz (2012), no significant relation was found between firm performance and legal institutions quality or the existence of shareholder-protection rights. In the aftermath of the financial crisis, policy makers called for increase in the financial expertise of board members.

Minton, Taillard and Williamson (2011) investigated if financial institutions with financially experienced and more independent boards performed better during the crisis. They found that although financial expertise of the board was positively related to ex-ante bank performance, it was negatively related to ex-post performance in the crisis. According to Minton et al., (2011), directors with financial expertise recognise " ... that the residual nature of shareholders' claim on a bank's highly leveraged balance sheet that is guaranteed by the government(p.6)" engaged in excessive risk-taking activities before the financial crisis. Aebi, Sabato

and Schmid (2012) analysed the effect of having 'risk-governance' on banks' performance during the financial crisis. The term 'risk-governance' captures several internal governance mechanisms used to control risk in banks such as the presence of a chief risk officer (CRO) on the board, ensuring CRO reports directly to the board of directors, and other risk management-related corporate governance mechanisms. Results showed that banks with risk governance in general perform significantly better during the crisis.[16] They also found no significant relation between the 'generally accepted good governance' (e.g. CEO ownership, shareholder rights using the G Index as a proxy) and a bank's performance during the financial crisis. Furthermore, consistent with earlier studies, results indicate banks with more independent board, higher percentage of directors with finance background, and institutional shareholdings performed significantly worse during the financial crisis.

Lastly, Cornett, McNutt and Tehranian (2010) explored if internal corporate governance mechanisms in the US banking industry are related to banks' performance during the financial crisis. In contrast with other studies, results suggested that the weakness of internal governance mechanisms before and during the financial crisis was significantly related to banks' (especially large banks) market returns in 2008. Namely, a less independent board, pay-for-performance insensitivity, a decrease in insider ownership, CEO role duality, and CEO-friendly nominating committees are all associated with a decline in the stock performance during the financial crisis. Cornett et al. (2010) argued that banks, particularly the larger ones, experienced decrease in internal monitoring despite effective corporate governance being in place.

[16]Banks where CRO reports to the CEO perform significantly worse than other banks in their sample. Noteworthy, although improving risk management function and governance would benefit banks during crises, it may also come at the expense of firms' performance in normal times (Aebi et al., 2012).

2.7. Labour Market for Directors in the Financial Sector

Studies on labour market for directors usually exclude financial firms from their samples due to their particularities (see for example, Yermack, 2004). However, there are a few studies that examined either directors' compensation and/or turnover in the financial sector. The most recent study to consider NEDs' labour market in the financial sector is the one conducted by Davidoff, Lund and Schonlau (2014) in the US market. Although they found a significant relationship between financial firms' performance and NEDs' turnover, the economic significance of this relationship was weak.[17] In addition, the financial crisis itself did not seem to have an effect on NEDs' turnover, which might be consistent with the literature discussed earlier on financial sector's performance during the financial crisis.

Regarding external directorships, no significant relation was found between the performance of the focal financial firm, based on the prior two years, three and four years, and the subsequent future board seats that a NED gained. According to Davidoff et al. (2014), this may suggest that other firms "... are not basing their board appointment decisions on performance at an outside directors' other firms, but rather on other characteristics (p.23)". Finally, their results indicate that NEDs' remuneration had no significant correlation with their firm performance regardless of the measurement or time span used. Instead, they found firm size and years of service are the main determinants of directors' pay. Similarly, Doucouliagos, Haman, and Askary, (2007) found firm size to always have a positive relationship with directors' pay in the Australian banks. However, they did find some evidence for links between directors' total remunerations and firm performance but only when long lagged return is used. Table 2.6 summarises key studies related to labour market for directors.

[17] A large change of one SD in firm performance is associated with an only 1.22% change in the likelihood of NED's turnover. Since 2.2% change is considered modest, the 1.2% change is economically insignificant.

Table 2.6
Summary of Studies on the Labour Market for Directors in the Financial Sector

Author(s)	Dependent Variable(s)	Main Independent Variables	Control Variables	Sample	Main Findings
Davidoff, Lund, & Schonlau (2013)	**NED's** Turnover (Logit Model)	*Focal Firm Performance:* Stock return-net of market lagged once and twice	Firm size, NED's Years of service, NED's Ownership, Dummy variables for the following; Age is 70 and over, Age is between 65 and 69, Gender, Committee Membership, presence or absence of a classified board, Sample Years.	4856 U.S. financial firm director years (2006-2010).	A **statistically significant** (economically poor) correlation between firm's stock returns net of market lagged once and twice, at the five percent level.
Davidoff, Lund, & Schonlau (2013)	**NED's** Total Outside Directorships Held (Ordered Logit Model)	*Focal Firm Performance:* Stock return-net of market lagged twice. Similar results obtained when model extend by including Stock return-net of market (t_3) & (t_4).	Firm size, NED's Years of service, NED's Directorships lagged once, Dummy variables for the following; Age 70 and over, Age is between 65 and 69, Gender, Sample Years.	4881 U.S. financial firm director years (2006-2010).	**No statistically significant** correlation between the performance of the "home" financial firm in the prior two years and future board seats gained in subsequent years.
Davidoff, Lund, & Schonlau (2013)	**NED's** Total Compensation (ln – OLS)	*Focal Firm Performance:* Stock return-net of market lagged once and twice. Stock return-net of peers lagged once and twice.	Firm size, NED's Years of service, Dummy variables for sample years.	5399 U.S. financial firm director years (2006-2010).	**No significant** correlation between NEDs' pay and firm performance across any measure of financial firm performance.
Renneboog & Zhao, (2011)	**CEO's** Total Compensation (ln – Random Effects Model)	*Network/Centrality measures:* • Direct Network measured by the degree and eigenvector centrality measures. • Indirect Network measured by closeness and between-ness measures.	• *Focal Firm Performance:* ROA and Market-Adjusted Stock Return. • *The firm characteristics;* Firm Size (TA); Debt to Asset; Stock Price Volatility; Remuneration Consultant; Stock holdings of EDs, NEDs, Institutional Investors, Corporations, Individuals. • *Board characteristics:* Percentage of Outside Directors and Percentage of Female Directors. • *CEO characteristics:* Tenure; Gender; Committees membership; Duality; ownership.	6773 firm years, All public traded UK companies (incl. Financial Sector) from 1996 to 2007	The relationship between CEO compensation and firm performance is dependent on CEO' network. In companies with strong network and hence busy boards the directors' monitoring effectiveness is reduced which leads to higher and less performance-sensitive CEO compensation.
Doucouliagos, Haman, & Askary, (2007)	Total Directors' Compensation (ln – OLS & Fixed Effect Model)	*Focal Firm Performance:* ROA, ROE, EPS, Stock Return. All variables were lagged once and twice.	• *The firm characteristics;* Ln Firm Size (t_1); Percentage of stock owned by the top 20 shareholders; Directors' Compensation (t_1). • *Board characteristics* Committees Number; Percentage of board directors held other Directorships; Percentage of NEDs; Meetings Frequency; Board Size, Turnover. • *Directors characteristics:* Age; Inside Ownership.	127 bank years, All public traded (10) Australian banks from 1992 to 2005	No contemporaneous association between bank performance and directors' compensation, & **no association** with prior year performance. However, "there is a more distant pay-performance relationship, with total directors' pay having a robust positive association with EPS (t-2), as well as with ROE (t-2)".

2.8. Chapter Summary

This chapter discusses the contextual setting of this thesis. The issues covered in this chapter can be divided into two main parts. In the first part, the focus is on the broad corporate governance framework that all public listed firms have to accommodate. It starts with a general discussion of corporate governance in the UK followed by the current recommendations of the Code while highlighting some of its research-related provisions. The second part is devoted to the UK financial sector. The specific governance recommendations that directors in regulated sector need to comply with is elaborated. The discussion then moves to the UK financial sector and most importantly its performance during the financial crisis. This part attempts to present some corporate governance related explanations for the BOFIs' poor performance during the crisis. The chapter concludes with studies examining the market consequences for directors working in the financial sector. The next chapter presents the first empirical study of this thesis which explored the main antecedents of board task performance in the UK over a fifteen-year period.

Chapter 3

Insights on Diversity, Competitive Capital and Busyness of UK Boards

3.1. Introduction

As mentioned in Chapter 1, this thesis consists of three empirical chapters addressing three interrelated issues regarding boards' ability and incentives. This chapter presents the first empirical work to explore the abilities of UK listed firms' boards. The main aim of this chapter is to provide a timely review of boards' characteristics of most concern to both regulators and scholars regarding the UK listed companies. This includes boards' diversity attributes (i.e. statutory, competitive, and demographic), boards' competitive capital (i.e. educational qualifications, social networking, and governance experiences), and boards' busyness. This chapter also shows the extent to which previous boards' characteristics were affected by the post-financial crisis regulations.

The remainder of the chapter is structured as follows. The next section presents an overview of the chapter, highlighting its importance and objectives. Section three presents the relevant literature review to address the research questions for this part of empirical work. This is followed by the research design in

section four. Finally, the findings and chapter summary are discussed in sections five and six, respectively.

3.2. Chapter Overview

The role and performance of boards in general, and the NEDs in particular, lie at the centre of commentators' discussion in the wake of any corporate failure. Earlier corporate governance research, dominated by the agency theory perspective (Roberts et al., 2005), has largely seen corporate failures as a self-seeking problem on the part of the firms' management or executives. Corporate governance codes, therefore, focused on structural remedies for overseeing and controlling the 'opportunistic' behaviour of management (Segrestin and Hatchuel, 2011; Zattoni and Cuomo, 2010). These 'structural' remedies or so-called board statutory diversity (BSD) are aimed at empowering the NEDs through recommendations related to the board leadership structure, the proportion of NEDs on the boards, and the independence of board committees (Ben-Amar et al., 2013).[18] However, over the last two decades, the link between various BSD recommendations and expected outcomes has been empirically challenged (see Musteen et al., 2010, for a review, see Daily et al., 2003; Hermalin and Weisbach, 2003; Huse et al., 2009; Siebels and Knyphausen-Aufseß, 2012).

Given the mixed results in BSD-performance research, another line of research highlights the need for theoretical 'pluralism' to overcome agency theory's narrow view of management as opportunistic individuals but who are 'perfectly competent' (Knockaert and Ucbasaran, 2013; Minichilli et al., 2009; Oh et al., 2013; Roberts et al., 2005; Zattoni and Cuomo, 2010). In reality, corporate failures due to directors' 'honest' incompetence are as common as self-seeking behaviour failures (Hendry, 2005). Therefore, proponents of the resource-based view (RBV) suggest that NEDs who possess a range of skills and qualifications can play an important

[18]The statutory diversity – sometimes called statutory independence, refers to "the diversity of incentives between outsiders and insiders represented on the board should help them meet their fiduciary obligations and keep managerial discretion within proper bounds"(Ben-Amar et al., 2013: 86).

role in addressing the issue of managements' incompetence by offering advice and counsel (Huse, 2005; Minichilli et al., 2009).

The service role that NEDs offer may not only ensure firms' survival but also enhance their competitive position especially if the skills held by board members and NEDs are scarce relative to their competitors (Bammens et al., 2011). Management scholars also suggest that board's service role depends on the extent to which the right mix of knowledge and expertise is present on the board (Carpenter and Westphal, 2001; Forbes and Milliken, 1999; Hillman and Dalziel, 2003). Therefore, two main related aspects of board's qualifications are often addressed in the literature, i.e. board competitive capital (BCC) and board competitive diversity (BCD). The former i.e. BCC, which is a measure of occupational-related pluralism (e.g. skills, experience and qualifications) in the composition of boards, are expected to contribute to both monitoring and service roles of the board (Hillman and Dalziel, 2003). The latter i.e. BCD, is a measure of how diverse these collective skills, experience and qualifications are. The presence of skills and knowledge per se may not result in good execution of board's roles unless it is accompanied by diverse backgrounds. Hence, the literature in group dynamics highlights the importance of board diversity as an antecedent for the organisational workgroup's performance. Through its influence on affective, cognitive, communication, and symbolic processes, BCD as well as board demographic diversity (BDD) are expected to improve board's roles, boost creativity, and enhance the quality of the decision making (Erhardt, Werbel, and Shrader, 2003; Hillman and Dalziel, 2003; Milliken and Martins, 1996).[19]

As far as regulations are concerned, among the different attributes of diversity, i.e. BSD, BCD, and BDD, the first attribute has been the main target for most regulators around the globe, especially in Anglo-Saxon countries. Furthermore, Zattoni and Cuomo (2010) in their review of the corporate governance codes developed worldwide at the end of 2005, conclude that the codes tend to focus only

[19]However, the empirical evidence on such hypothesis is still mixed (Anderson et al., 2011; Ben-Amar et al., 2013; Zhu et al., 2014).

on BSD and that NEDs' "competencies and incentives are not considered a governance issue to be regulated in detail" (Zattoni and Cuomo, 2010: 64). However, the recent global financial crisis redirected the attention of both regulators and governance scholars towards the dysfunctionality of NEDs as a group in exercising their roles. Since NEDs have the 'power' to discipline and/or replace inefficient management in the pre- crisis period, their failure to do so may be attributed to their insufficient experience (ability aspect) and lack of commitment and incentives (motives aspect) which led to their poor governance performance (Fisch, 2010).

In the aftermath of the global financial crisis, regulators attempt to tackle those potential deficits in their post-crisis governance reforms. In the UK, the market has witnessed the launch of several reforms (e.g. the Walker Review, 2009; the Code, 2010; and the Davis' Report, 2011) including those specifically addressing NEDs' deficits. Firstly, there is greater emphasis on the importance of both board diversity and board competitive capital (i.e. the board overall balance of skills and experience). Secondly, NEDs' lack of commitment was also addressed in the post-crisis reforms by encouraging more restrictions on the overall number of directorships that a director can hold (i.e. board busyness).[20] Finally, the introduction of the Senior Management Regime (2013), which promotes directors' individual rather than collective legal accountability for the board's decisions, is expected to some extent help rectify NEDs' lack of incentives and passivity.

Although board's diversity has been extensively studied, most of these studies focus on one aspect of diversity, i.e. statutory diversity, and its effect on firm performance (Ben-Amar et al., 2013). However, little is known about how boards' diversity has been affected over the years by different stakeholders' pressures (e.g. media, regulators, and shareholders). Therefore, this study systematically explores the three different components of board diversity (i.e. statutory, competitive, and demographic diversity) using a large dataset that covers the UK public listed firms over the last fifteen years (1999-2014). In addition to board's diversity, this study contributes to the literature on antecedents of board's performance (Minichilli et

[20]For instance, the issue of NEDs' busyness and chairmen's busyness were among the Walker Review's (2009) thirty-nine main recommendations for banks and other financial institutions (BOFIs).

al., 2009) by examining another two prerequisites for board efficiency, namely, board competitive capital and board time commitment. In other words, besides board diversity, this study also explores how the UK boards' competitive capital have developed overtime. Furthermore, the issue of board busyness and the extent to which these firms have responded to the regulatory and shareholders' pressure to increase the board's overall time commitment are also considered. Hence, this study further extends the literature on multiple directorships and board busyness (see, for example, Kiel and Nicholson, 2006).

In short, this part of the study firstly provides insights on the extent to which the regulators' endeavours was successful over the years in increasing the diversity, competitive capital, and commitment of boards, especially in the UK where the 'comply or explain' approach is adopted. Secondly, it will demonstrate if there has been variation in the board's diversity, capital, and commitment and whether they are dependent on any particular equity market indices and sectors they serve. Thirdly, since the data set spans the period between 1999- 2014, this study will trace any changes in the different components of board diversity (BSD, BCD, and BDD), board capital and board busyness in the wake of the financial crisis and its related reforms in the business and regulatory environments.

3.3. Research Questions

As mentioned in Chapter 1, the general objective of this part of the study is to provide a timely review over the last 15 years (2000-14) of boards' characteristics of most concern to both regulators and scholars in the UK listed companies. In doing so, this chapter aims to answer the following questions covering three main groups of boards' characteristics, i.e. boards' diversity attributes, boards' competitive capital, and boards' busyness. Section 3.6.2 will provide answers to each of those questions in a separate subheading.

Objective 1: Board Diversity

Q1a. Are there significant changes on the diversity attributes (i.e. statutory, competitive, and demographic) of boards of companies listed in the UK over the last fifteen years?

Q1b. Are there significant differences in the boards' diversity attributes across various FTSE Indices?

Q1c. Are there significant changes in the extent of board-level diversity attributes before and after the financial crisis?

Objective 2: Board Competitive Capital

Q2a. Are there significant changes in the competitive capital of boards of companies listed in the UK over the last fifteen years?

Q2b. Are there significant differences in the boards' competitive capital across various FTSE Indices?

Q2c. Are there significant changes in the boards' competitive capital before and after the financial crisis?

Objective 3: Board Busyness

Q3a. Are there significant changes in the level of boards' busyness of companies listed in the UK over the last fifteen years?

Q3b. Are there significant differences in the level of boards' busyness across various FTSE Indices?

Q3c. Are there significant differences in the level of boards' busyness before and after the financial crisis?

Objective 4: Board Characteristics and Financial Performance

Q4. Are there significant relationships between boards' characteristics (i.e. diversity, competitive capital, and busyness) and market-based financial performance of companies listed in the UK?

3.4. Literature Review

3.4.1 Conceptual Framework

The literature describes board of directors as an episodic work-group composed of elite, and mostly outside individuals, who make complex, multifaceted and strategic decisions (Forbes and Milliken, 1999) that may considerably affect the corporate's performance. The distinctive nature of this governance work-group attracts the attention of scholars from different disciplines, viz., finance, economics, sociology and management. Specifically, the attributes of the board of directors (e.g. board composition and competence) that could lead to an optimal corporate performance is among the most frequently asked questions in the literature.[21] However, results of studies on these attributes are mixed (Chen, Dyball and Wright, 2009), partly due to the different approach adopted by different disciplines in understanding how board composition and competence affect corporate outcomes (Kiel and Nicholson, 2003). Figure 3.1 presents the conceptual framework on the antecedents of board task performance.

The most dominant perspective in the economics and finance literature is related to the agency theory. According to this view, monitoring is perceived as the main role of boards and if executed diligently, will reduce agency cost and indirectly affects firm performance. It contends that effective monitoring is a function of board independence. Consequently, finance scholars examine the association between board composition as a construct for board independence and a wide range of other board- and firm- levels outcomes. In the conceptual model presented in Figure 3.1 , this association is hypothesised in a line connecting the BSD to its control role.[22] The indirect relationship between board control role and the firm-level outcome is illustrated in Figure 3.1 by the dotted arrow.

[21] Board composition refers to "the number of board members and the configuration of competence and characteristics among them" (Huse, 2005: S68).

[22] However, empirical evidence on the relationship between the different BSD's recommendations and corporate performance is not conclusive (Bhagat and Black, 2001; Dalton, Daily, Certo, and Roengpitya, 2003; Kiel and Nicholson, 2003).

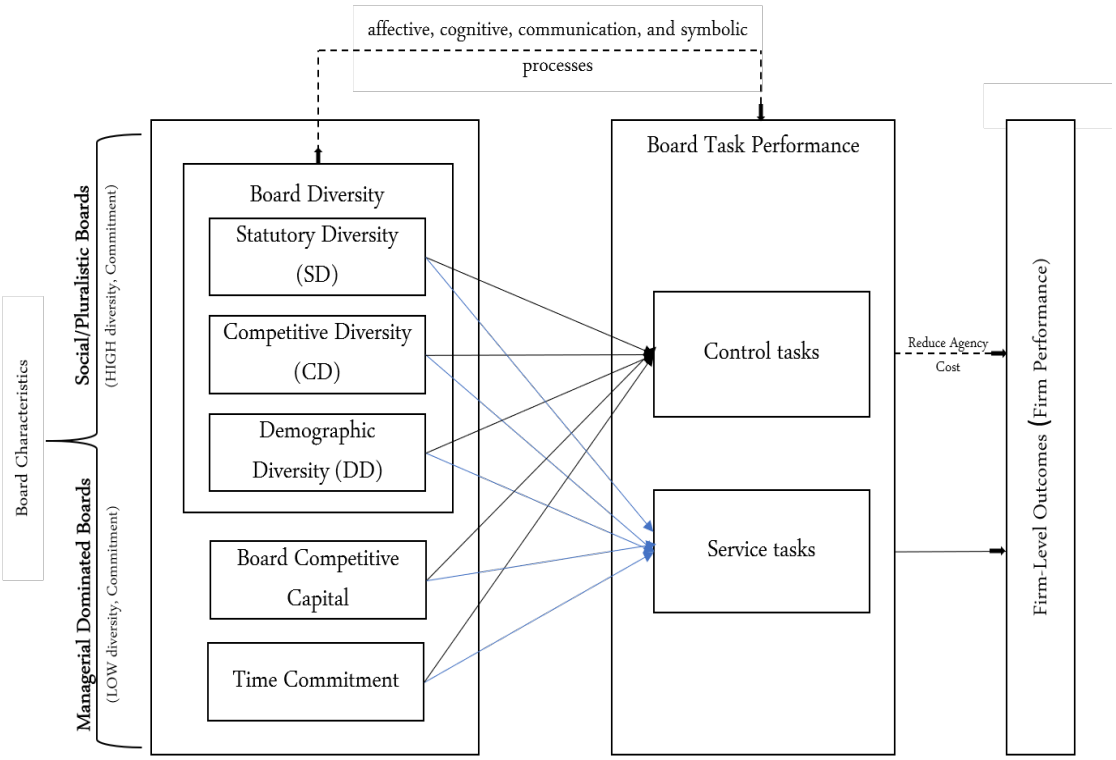

Figure 3.1: The Conceptual Model: Antecedents of Board Task Performance

The second hypothetical perspective, which is relatively less explored, is usually adopted by sociologists and management scholars (Hillman and Dalziel, 2003). It builds on both the resource based view (Barney, 1991) and resource dependence theory (Pfeffer and Salancik, 1978) in arguing that directors through their vocational and personal qualifications and network provide valuable 'resources' to the firm.[23] In addition, they contribute to firm performance by reducing the firm's dependency on external environment and enabling access to external important resources. Thus, board competitive capital in providing advice and counselling is directly associated with the firms outcomes (Daily et al., 2003; Hillman and Dalziel, 2003).[24]

[23]Pfeffer and Salancik (1978) contend that "when an organization appoints an individual to a board, it expects the individual will come to support the organization, will concern himself with its problems, will variably present it to others, and will try to aid it" (1978: 163).

[24]Board Competitive Capital is sometimes called 'Board Capital' (Hillman and Dalziel, 2003) or 'Board Competence' (Huse, 2005). This usually includes the directors' relational or social capacity, in addition to their general, functional, board-specific knowledge and skills. It is distinguished from board characteristics which include "age, tenure, seniority, gender, race, individual behaviour, esteem, influence, independence, integrity and so on" (Huse, 2005: S69). This thesis tends to use the term 'board competitive capital' as it better reflects the difference between board's skills, which are sought in the employment market, and other board characteristics.

Although effective execution of board service roles (e.g. counselling and boundary spanner) is a function of the presence of board capital (Hillman and Dalziel, 2003), the board's monitoring role is also likely to be reinforced by the presence of such resources. For instance, board members who have governance experience can contribute to both roles by proposing a new governance technique to a firm, having witnessed its success on another firm's board (Kiel and Nicholson, 2006). Two lines in the conceptual model illustrate the association between the presence of board competitive capital on one hand and the two roles of the boards on the other hand. In addition, the model shows the connection between board service role and firm-level outcomes through a direct arrow from the first to the latter.

The final approach to the study of board composition is the behavioural perspective which has its roots in psychology and sociology literature in general, and group dynamics in particular (Cohen and Bailey, 1997). Unlike the previous 'board role' theories (e.g. agency and resource dependency theories), the focus is not on the board's role but rather on the board's culture as a decision-making group, which in turn affects the board's task performance. Committed and creative workgroups who are able to engage in critical discussions and attend to task conflicts are expected to perform both their service and monitoring roles better (Forbes and Milliken, 1999; Huse, 2005).[25] The empirical work in this field is usually centred on examining the association between boards' diversity as a prerequisite for enriching board's culture and their task and firm performances (see Table 3.1).

The conceptual model differentiates between three distinct aspects of board diversity (i.e. BSD, BCD, and BDD). In the first attribute of diversity i.e. board statutory diversity (BSD), the board's independence can be seen through not only agency theory perspective but also through the diversity lens. The presence of independent outsiders on the board can stimulate task conflict and creative thinking which eventually enhance the quality of the decisions taken by the group

[25]Task conflict is defined as "disagreements about the content of the tasks being performed, including differences in viewpoints, ideas and opinions" (Jehn, 1995: 258).

Table 3.1
Summary of Studies on the association between Board's Diversity and Outcomes

Author(s) / Study	Firm-level outcomes (Dependent variables)	Board Diversity Aspects	Diversity-related variables (Independent variables)	Other independent and control variables	Sample	Main Findings
(Ben-Amar et al., 2013)	Merger and Acquisition decisions (cumulative abnormal returns)	BSD, and BDD	• Statutory diversity index (i.e. proportion of independent directors on the board, leadership structure (duality), percentage of outside directors' ownership). • Demographic diversity index (i.e. percentage of women on the board, percentage of foreign directors, directors' tenure).	Ownership variables, Relative size of the transaction, Method of payment, Public status of the target, Cross-border transactions, Target operating in the high technology sector, Relatedness of the activities acquirer/target.	Sample of 289 M&A decisions undertaken by Canadian firms over the eight years (2000–07).	• Demographic diversity is significantly related to M&A performance, while statutory diversity has limited influence.
(Anderson et al., 2011)	Firm Financial Performance (Tobin Q)	BCD, and BDD	• Social Heterogeneity (i.e. Director Age, Gender, Ethnic-Minorities). • Occupational Heterogeneity (i.e. Educational Level, Degree Type, Firms Worked with, Higher Posts, Number of External Board Seats, Director Tenure).	• Board Size, Growth Opportunities, Insider Holdings, Firm Risk. • Firm Complexity (Firm size, leverage, and tangibility of assets). • CEO Power, Board Independence.	Sample of US Industrial firms (615 firms, 1,230 Observations).	• In complex firms, investors place valuation premiums on heterogeneous boards. However, in less complex firms, investors place discount on heterogeneous boards. • Overall, greater heterogeneity may not necessarily improve board efficacy.
(Musteen et al., 2010)	Firm Reputation	BSD	• Proportion of independent directors on the board. • Leadership structure (duality). • Average tenure of outside directors.	Return on assets, Industry, Firm growth, Firm risk, Firm size, Firm age.	Fortune's list of most admired corporations in the USA (324 firms).	• More independent board and those with larger boards exhibited better reputation. • Inverted-U relationship between the average tenure of NEDs and firm reputation. • A negative association between independent leadership structure (i.e. absence of duality) and firm reputation.
(Tuggle, Schnatterly, & Johnson, 2010)	entrepreneurial orientation	BCD	• Board's heterogeneity of tenure. • Functional background heterogeneity. • Proportion of directors with product-oriented background (i.e. marketing, sales, and R&D). • Industry Background Heterogeneity.	Board size, Average board tenure, CEO duality, Ownership percentage, Firm age and size, ROA, Debt to assets, Business diversification, Environmental controls.	Sample of 184 US public listed corporations (1,067 firm-year observations)	• Boards that shows greater heterogeneity in terms of directors' tenure, industry experience, and product- oriented backgrounds allocated more attention to entrepreneurial issues on their board meetings.

Table 3.1 ***(Continued)***
Summary of Studies on the association between Board's Diversity and Outcomes

(Chen et al., 2009)	Corporate Diversification	BSD	• Proportion of independent directors on the board • Proportion of institutional representatives on the board. • Proportion of interlocking directors with extra-industry ties on the board.	Size, Leverage, Liquidity, Free cash flow, CEO options.	Australian corporations (101 randomly selected).	• No association between board independence or proportion of institutional representatives, and the firms' level of diversification. • A positive association between the proportion of interlocking directors with extra-industry ties on the board and the firms' level of diversification.
(Kang et al., 2007)		BSD, and BDD	• Two of the board diversity attributes (gender, age). • Board independence.		Largest Australian corporations.	• Overall, Australian firms' boards have a high level of independence, however they have very limited gender or age diversity. • The board size is significantly associated with the age diversity, while industry type, and level of shareholder concentration are associated with both age diversity and independence of directors.
(De Andres, Azofra, & Lopez, 2005)	Firm Value (Equity market-to-book ratio)	BSD	• The proportion of outsiders (NEDs).	• The size of the board. • Board internal functioning; the average number of meetings per year • Firm size (total assets). • Firm debt.	Non-financial companies from ten countries in Western Europe and North America (378 firm years).	• The board size is significantly and negativity associated with firm value. • No significant relationship between proportion of outsiders (NEDs) and average number of meetings, and the firm value.
(Molz, 1995)	Firm Social Performance	BSD, and BDD	• Proportion of independent directors on the board. • Leadership structure (duality). • Independent of nomination committee, and social responsibility committee. • Female and Ethnic-Minorities representation. • Tenure of the chairman/CEO.	• Frequency of board meetings. • Stockholdings of insiders.	Sample of US Fortune 500 (50 firms).	Based on Chi square test of differences, managerial dominated boards is associated with socially responsible firms, where pluralistic/ social boards is associated with firms showing poorer social responsivity.

(Forbes and Milliken, 1999). As such, board independence can contribute to board service role as well as controlling role. Secondly, several group dynamics and governance studies suggest that "diversity in the composition of organizational groups affects outcomes" (Ben-Amar et al., 2013; Erhardt et al., 2003; Hillman and Dalziel, 2003; Milliken and Martins, 1996). The model acknowledges such association by including the other two main types of 'non-statutory' diversity, i.e. board demographic diversity (BDD), and board competitive diversity (BCD) or job-related diversity. The connection between the three attributes of board diversity and board task performance is represented in the model by multiple straight lines between board's diversity and its roles.

Finally, contemporary board of directors has a few features that distinguish it from other organizational workgroups. This includes the dominant presence of independent 'outsider' directors, the part-time nature of the directorship post, and the board's episodic functionality (Forbes and Milliken, 1999). Due to these distinctive features, the behaviour of some boards has been described as purely ornamental 'rubber stamping'.[26] Therefore, researchers have been interested in finding what render certain boards passive (Machold and Farquhar, 2013). One line of studies focus on directors' lack of incentives as the main driver for their passivity, suggesting compensation-related reforms (Shen, 2005; Tosi, Shen, and Gentry, 2003).[27] Another line of studies suggest that board's passivity is a function of directors' busyness (Harris and Shimizu, 2004). Busy boards may lead to 'entrenched management' since 'busy' directors may not perform their monitoring role diligently (Devos, Prevost, and Puthenpurackal, 2009). Furthermore, the effectiveness of independent directors suffer from their lack of knowledge of firm's affairs and reliance on management as a source of information, a problematic issue known as 'the independence paradox' (Hooghiemstra and van Manen, 2004). The independence paradox is seen as a "product of the limited amount

[26] Mace (1971) was the first to observe the phenomenon of "rubber stamps", which he believed to be the statues of many boards. On the other hand, it has been suggested that the board rubber stamping behaviour described by Mace (1971), and Lorsch and MacIver (1989) to be a phenomenon of the past (Adams et al., 2010).

[27] Equity-based compensation for NEDs is discouraged in the UK. Hence, board busyness is the main focus in this thesis.

of time that independent directors devote to the corporation" (Chen et al., 2009: 209). Consequently, independent directors who possess unique abilities should not be 'overburdened' to be able to acquire firm-related knowledge and do their roles diligently without relying on management. The model addresses directors' time commitment toward the firm as another determinant for board tasks' performance. In the following three subsections, a review the relevant literature followed by the UK regulators' recommendations regarding each antecedent of board task performance (i.e. board's diversity, competitive capital, and commitment) are presented.

3.4.2 Board Diversity (BSD, BCD and BDD)

3.4.2.1 Studies on Board Diversity

This study differentiates between three main attributes of board diversity: BSD, BCD, and BDD. Among these different diversity's attributes, the BSD stands out in the literature and corporate governance codes as being of the greatest interest.[28] Over the last two decades, regulators have been promoting board structures that ensure the dominance of independent directors who are presumed to be protecting the shareholders' interests over boards' different functions. These recommendations include the separation between the role of CEO and Chairman and a majority representation of NEDs on the board and its various committees. The BSD recommendations, whether regulatory enforced or widely acknowledged as governance 'best practices', are based on the assumption that a significant presence of independent NEDs on the boardroom would enhance the monitoring process, decrease the management opportunistic tendency, and eventually protect shareholders' value (Fama and Jensen, 1983). However, over the last two decades, this assumption has been empirically challenged by many studies examining the link between BSD's recommendations and expected outcomes (Musteen

[28]The statutory diversity, sometimes called statutory independence, refers to "the diversity of incentives between outsiders and insiders represented on the board should help them meet their fiduciary obligations and keep managerial discretion within proper bounds"(Ben-Amar et al., 2013: 86).

et al., 2010, for a review, see Daily et al., 2003; Dalton et al., 1998; Hermalin and Weisbach, 2003; Huse et al., 2009; Siebels and Knyphausen-Aufseß, 2012).

In light of these findings, governance scholars are increasingly drawing on the sociology literature in getting more insights into how other classes of board's diversity may influence outcomes (Daily et al., 2003; Hillman and Dalziel, 2003). Milliken and Martins (1996) categorise workgroup's diversity into two main types, observable diversity and less visible diversity. BDD is classified as an observable diversity that includes readily detectable attributes such as ethnic background, age, or gender while on the other hand, BCD is less visible and includes underlying attributes such as education, tenure in the organization, and functional background (Kang et al., 2007; Milliken and Martins, 1996).

Table 3.1 (see page 58) shows different attempts in the literature to explain firm performance by considering the interactions among board's attributes that make up both independence and diversity (Ben-Amar et al., 2013). The work of Molz's (1995) was perhaps the first to do so, yet he did not distinguish between BSD and BDD. In his paper, he discussed two main types of boards, managerial dominated board and social/pluralistic board, which represent two extremes of the spectrum. Managerial dominated boards are captive of management and are less committed, while social/pluralistic boards are more committed and are more diversified. The former type of boards, according to Molz (1995), describe the state of governance at that time, while the latter are expected to be associated with better task performance and hence firm performance. However, Molz (1995) found no evidence that social/pluralistic boards are associated with better social or financial corporate performance. One possible reason for these findings is the measurement Molz (1995) used to identify social boards whereby the different types of diversity (i.e. BDD and BSD) are limped together with a narrow focus on gender diversity. In their study of Canadian board's diversity, Ben-Amar et al., (2013) overcome this limitation by distinguishing between BSD and BDD, and their potential diverse effect on board decisions. They found BDD to have a significant influence on merger and acquisition decision, while BSD has limited impact.

The current study extends the Ben-Amar et al.'s (2013) diversity-performance framework by including another board diversity aspect, i.e. BCD. It is important to consider all board's diversity aspects as different attributes could have diverse effect on board effectiveness and firm performance (Anderson, Reeb, Upadhyay, and Zhao, 2011). Indeed, some scholars argue that calls for less uniformity in the boardroom may be based on social or ethical merits rather than wealth maximisation (Agrawal and Knoeber, 2001). Furthermore, firm's profitability can be affected by board's heterogeneity due to greater communication, coordination, and social barriers that heterogeneous boards suffer from (Anderson et al., 2011).

3.4.2.2 Regulatory Requirements for Board Independence and Diversity

The boards' overall diversity, including its different attributes, i.e. BSD, BCD, and BDD, is generally encouraged under the UK Combined Code on Corporate Governance (FRC, 2008). Under section B of 'board effectiveness', regulators urge the UK listed firms to keep an "appropriate balance of skills, experience, independence and knowledge of the company" on their boards to ensure effective discharge of board's responsibilities. However, only board independence is regulated in detail. For instance, UK listed firms' board should comprise independent NEDs and the company's annual report should show the 'independence' status for each NED.[29] Small listed firms' boards are excluded from this provision but should have at least two independent NEDs. On the other hand, other diversity attributes (i.e. BDD and BCD) are left at the discretion of the firms' board with a great emphasis on maintaining board diversity and balance of skills and experience when appointment decisions are made. Post-crisis, board diversity attracted more attention from policy makers and the media. For instance, in the UK, the

[29]Director should not be regarded as independent if (1) he/she "has been an employee of the company or group within the last five years". (2) If he/she "has, or has had within the last three years, a material business relationship with the company either directly, or as a partner, shareholder, director or senior employee of a body that has such a relationship with the company". In addition, (3) if he/she has "received or receives additional remuneration from the company apart from a director's fee, participates in the company's share option or a performance- related pay scheme, or is a member of the company's pension scheme; (4) has close family ties with any of the company's advisers, directors or senior employees". Finally, (5) if the director "holds cross-directorships or has significant links with other directors through involvement in other companies or bodies; (6) represents a significant shareholder; or (7) has served on the board for more than nine years from the date of their first election" (FRC, 2014).

Davies Report (2011) suggests increasing representation of women on the FTSE 100 boards to at least 25% by 2015 (Mulcahy and Linehan, 2014). With regard to the financial sector, the Walker Review encourages regulators (i.e. FSA) to

> "give closer attention to the overall balance of the board in relation to the risk strategy of the business, taking into account the experience, behavioural and other qualities of individual directors and their access to fully adequate induction and development programmes" (Walker, 2009, p.50).

3.4.3 Board Competitive Capital

3.4.3.1 Studies on Board Competitive Capital

Boards of directors are usually distinguished in the literature based on their composition, competence, characteristics and compensation (Huse, 2005). The previous section (3.4.2) discusses the literature on board composition, the configuration of their competence and their characteristics. This section focuses on board competence which includes directors' functional, knowledge, skills, and relational or social capital (i.e. competitive capital). A growing body of research investigate how board's competitive capital may be linked to board-level (e.g. strategic decisions) and firm-level (e.g. financial performance) outcomes. The substantive contributions to firm performance can be made not only through board decision control but also through provision of resources and advice by board members in general and NEDs in particular (Daily et al., 2003; Hillman and Dalziel, 2003).[30] Table 3.2 summarises some of the main studies that focus on board different competitive capital, as a dependent variable, published over the last decade.

Among the different aspects of board's competitive capital, directors' occupational experience (Giannetti, Liao, and Yu, 2015; Haynes and Hillman, 2010;

[30] As with both agency and stewardship theories, by concentrating only on links to the external environment, resource dependence theory ignores alternative activities of the board such as providing advice (Westphal, 1999; Lorsch and MacIver, 1989), monitoring (Johnson et al., 1996; Bainbridge, 1993; Fama, 1980) and strategising (Kesner and Johnson, 1990; Lorsch and MacIver, 1989)

Table 3.2
Summary of Studies on the Association Between Board's Competitive Capital and Outcomes

Author(s) / Study	**Firm-level outcomes (Dependent variables)**	**Board capital-related variables (Independent variables)**	**Other independent and control variables**	**Sample**	**Main Findings**
(Giannetti et al., 2015)	• $ROE_{(t+1)}$. • Market to book ratio. • Total Factor Productivity.	• Proportion of directors with foreign experience (based on foreign work experience and/or foreign education). • Fraction of directors who sit on the boards of two or more publicly traded firms (winsorized).	• Diversity variables: the proportion of directors that are foreign nationals, female directors, non-independent directors. • Average tenure and age, board size, board political connection, ownership, state, size, leverage, No. of business segments, free cash flow, young IPO, firm stock volatility.	Nonfinancial public listed firms in mainland China from 1999 to 2009 (1,738 firms for a total of 13,840 firm-year observations)	• Only foreign experience and tenure are significantly associated with firm's ROE. • Foreign experience, proportion of non-independent directors, and percentage of foreigners are significantly associated with firm's MTB.
(Chen, 2014)	R&D Investment	• Directors' educational level. • Directors' industry-specific experience. • Interlocking directorate ties.[a]	Firm performance, leverage, diversification, firm age, free cash flow, investment opportunities, prior change in R&D, change in industry R&D, intensity, CEO tenure, CEO age, board tenure.	A panel of electronics public listed firms in Taiwan (271 firms and 813 observations).	Board capital is positively related to R&D investment, while CEO power moderates this effect.
(Dalziel et al., 2011)	R&D Expenses	• Entrepreneurial finance experience (i.e. venture capital, investment banking experience). • Technical experience (i.e. science and engineering). • Advanced education (i.e. doctoral-level degree). • Ivy League education	Industry, ROA, Firm size and age, Current ratio, Debt to assets ratio, Diversification, Average age of directors.	Sample of 225 public listed US firms in biotech & pharmaceuticals industries	• Findings indicate that directors' human and relational capital (i.e. education, entrepreneurial finance experience, technical experience, and interlocks) have a significant impact on R&D spending.

[a]Educational level proxed by mean of the aggregate number of years of schooling for directors. Industry experience proxed by percentage of directors who are highly experienced in the electronics industry. Directorate ties proxed by total number of board directorships that the directors hold at other firms divided by the board size – proxy for board social capital.

Table 3.2 ***(Continued)***
Summary of Studies on the Association Between Board's Competitive Capital and Outcomes

(Dalziel et al., 2011) (Continued)		• Interlocks (as a proxy of relational capital) *(The score for each aspect of capital was tallied together with that of other directors)*	Board size, Board tenure, CEO duality, Inside directors, Outside directors.		• The independence status of directors affects the way they use their human and relational capital. These "effects can be easily observed" by estimating the effect of the capital of each type of directors separately.
(Tian et al., 2011)	Board effectiveness in CEO selection [based on the abnormal stock returns following the CEO appointment announcement]	• Board human capital; (A) Directors' experience of serving as CEOs at other companies (% of INEDs who were CEO) (B) Directors' experience of working in the focal firm's industry. • Board social capital; (A) Directors' co-working experience on the focal board (the overlap in INEDs' board tenures). (B) Board's external directorship ties to other corporations.[a]	• Governance experience diversity (CEO exp., Co-working exp., Industry exp., & external directorship ties) - proportion of independent directors. • CEO characteristics and succession context - firm size, ROE, market-to-book ratio, industry instability.	Sample of new CEO appointment announcements by large non-diversified plc U.S. manufacturing firms (1999-2003)	• Findings indicate that board capital, both human and social, significantly explains how effective a board is in CEO selection. • Findings show some evidence that market reactions "might be affected by different 'combinations' of new CEO origin and the hiring board's social capital".
(Gore, Matsunaga, & Eric Yeung, 2011)	The proportion of CFO's total compensation that is equity based	Board financial expertise: (A) Existence of a finance committee of the board of directors. (B) Whether the CEO has a financial background.	• The proportion of independent directors • Block shareholders, institutional ownership, firm size, the market-to-book ratio, leverage, dividend, annual stock return, the age and tenure of the CFO.	Sample of firm years in the ExecuComp database from 1993–2001 (3,503 CFO/firm-years)	• Firms that have board finance committee and/or CEO with financial background are more inclined to use lower levels of incentive-based compensation for their CFOs. • Findings indicate that "financial experts provide stronger oversight and/or direction with regard to firm financial policies and strategies".

[a] Director experience proxed by dummy if one or more INEDs had current or past work exp. in the same industry - directorship ties proxed by average number of external directorship ties held by the INEDs of the focal firm

Table 3.2 ***(Continued)***
Summary of Studies on the Association Between Board's Competitive Capital and Outcomes

(Haynes & Hillman, 2010)	Strategic change index [based on resource allocation (e.g. sales, R&D, assets, leverage)]	Board capital depth; (A) The ratio of directors who have current experience in the focal firm's main industry (B) The ratio of directors who have current or past experience in the focal firm's main industry	• Board capital breadth; heterogeneity index based on functional background, Occupational background, interlocking heterogeneity. • Firm's market capitalization, age, & Tobin's Q - Industry complexity, munificence, & dynamism - Board size, average tenure,& average age - CEO tenure, & CEO power	Sample of Standard & Poor's 500 firms (236 firms – 2500 directors)	• Findings indicate that heterogenous boards, in terms of both human and social capital, leads to more strategic change; which can be seen as a proximal variable in the relationship between firm's board capital and its performance. • No evidence for the moderating role of CEO power in the board capital "depth" – strategic change relationship. However, such role was supported for the breadth - strategic change relationship.
(Rhee & Lee, 2008)	Growth of foreigners' investment in the firm	• Ratio of NEDs holding masters or doctoral foreign degrees to all NEDs. • Ratio of NEDs who worked before or are working currently in governmental organisations. • Ratio of NEDs who previously worked in the same industry.	Number of NEDs, number of employees, lagged ROI, average growth rate of stock price in recent six months, firm age.	Largest public listed Korean firms (96 firms – 288 firm years).	Growth of foreign ownership is positively related to the proportion of NEDs with foreign degrees, proportion of NEDs with current affiliations with governmental institutions, and/or proportion of NEDs with experience of same industry.
(McDonald, Westphal, & Graebner, 2008)	Excess stock returns from corporate acquisition	• Directors' prior experience with acquisitions in related product markets/acquisitions. • Directors'. experience with unrelated acquisitions.	• Board independence. • Return on assets, debt-to-equity, free cash flow, acquiring firm size, target size, prior acquisitions of focal firm, total director acquisition experience, institutional ownership.	1,916 Acquisitions made by 489 listed industrial and service firms in US between (1988-1998).	The acquisition performance is associated with extent to which firm's outside directors [NEDs] had acquisition experience in the same product markets as the one being pursued. Results show similar findings with regard to related and unrelated acquisition experience of NEDs.

Rhee and Lee, 2008; Tian et al., 2011) and directors' social networking (Chen, 2014; Dalziel, Gentry, and Bowerman, 2011; Tian et al., 2011) received the most attention. Scholars often acknowledge the interdependent nature, theoretically and empirically, between the previous two aspects of board's competitive capital, occupational experience and social networking, and the difficulty in isolating the effects of one form over the other (Haynes and Hillman, 2010), especially when the latter is measured based on the interlocking directorate ties (i.e. total number of board directorships) (e.g. Chen, 2014).[31] Board's educational background also has been considerably examined in related literature, ranging from general educational background (Chen, 2014) to more specific one such as experience of studying abroad (Giannetti et al., 2015; Rhee and Lee, 2008), having master and/or doctoral-level degree (Dalziel et al., 2011; Rhee and Lee, 2008), and educated in the Ivy League (Dalziel et al., 2011).

As noted by Tian et al. (2011), "only limited empirical work has examined board human and social capital simultaneously. Previous studies on board capital are also limited in the sense that they lack a systematic, task-relevant classification scheme of board capital (p.732)". In addition, very few researchers studied board competitive capital and board diversity simultaneously rather than focusing on only one of them (see for example, Giannetti et al., 2015; Tian et al., 2011). That is, literature on managerial teams suggests that not only the level of team's capabilities affects firm outcomes but also how diverse these capabilities are. Therefore, this thesis explores both antecedents; board competitive capabilities and board diversity simultaneously.

[31] This study partially isolates the effects of these two interrelated aspects by measuring directors' social network based on the time a director spent serving with other directors on the past. Then the variables are aggregated from the individual to the board level.

3.4.3.2 Regulatory Requirements for Board Competitive Capital

The UK Combined Code on Corporate Governance (FRC, 2008) highlights the importance of competencies for individual directors. For instance, the competencies-related criteria for appointing a director need to be shown in a proper manner to the shareholders at the first AGM after the appointment date (see § B.2 and B.7).

Although competencies of individual directors are not considered a governance issue to be regulated in detail and is usually left for the market forces to regulate (Zattoni and Cuomo, 2010), there is an increasing demand on equipping directors with a specific type of knowledge such as risk management and financial expertise (Dodd-Frank-Act, 2010).[32] As far as the UK financial sector is concerned, the Walker Review (2009) sheds the light on the importance of governance or board experience per se. That is, the FSA's interview process is suggested to be assessed by "senior advisers with relevant industry experience at or close to board level of a similarly large and complex entity".

3.4.4 Board Busyness

3.4.4.1 Studies on Board Busyness

Multiple directorships occur when a director simultaneously serves on at least two firms' boards. The incidence of multiple directorships have been a controversial issue among researchers, shareholders activists and policy makers since the publication of Berle and Means's seminal work in 1932 (Ong, Wan, and Ong, 2003).[33] On the one hand, opponents of multiple directorships build their criticisms on how serving on multiple boards can be a source of distraction that undermines directors' due diligence (i.e. busyness hypothesis, see Ferris, Jagannathan, and Pritchard, 2003). As mentioned earlier, independent NEDs also need to invest

[32]Dodd-Frank-Act (2010) suggests that director should have "a bachelor's degree or higher from an accredited college or university in risk management, business administration, finance, economics [...] to demonstrate minimum competence in risk management (p.415)".

[33]Multiple directorships or interlocking directorates are sometimes used interchangeably in literature (see Appendix B). However, others differentiate between the two terms where interlocking refers only to directors who are sitting on each other companies

sufficient time learning about their firms to avoid over-reliance on management (i.e. the independence paradox, see Chen et al., 2009).

The negative effect of multiple directorships or busyness on firm-level outcomes has been supported by a number of studies in the literature. Fich and Shivdasani (2006), using Forbes 500 lists of largest corporations, found firms with interlocked directorate have significantly lower financial performance, measured by market-to-book ratios and other accounting measures, compared to other firms with less interlocking occurrence. In addition, there was evidence for significantly positive abnormal returns for the departure announcements of busy NEDs. Similarly, Devos, Prevost, and Puthenpurackal (2009), using US data (2001-03), reported negative reaction by shareholders to the announcement of directors' appointment who created the interlock.[34] In a more recent study, Falato, Kadyrzhanova and Lel (2014) examine the effect of multiple directorships on firm performance in a different methodological setting. They use the deaths of directors to create exogenous "variation in the time and resources available to NEDs at interlocked firms (p.404)". According to the authors, boards that experience 'attention shocks' i.e. the death of one of its own members, will find themselves having a sudden increase in the workload. Among these directors are those who were already busy before the death of the board co-member (i.e. the treatment group). They found that market react negatively to such attention shocks but only for treated director-interlocked firms.[35]

On the other hand, other researchers believe that the 'acceptable' number of external board seats should be left to the individuals themselves and the boards to determine (Kiel and Nicholson, 2006). In this view, directors are considered as good stewards (Davis, 1997) and can be trusted to find the right balance of responsibilities. Moreover, a director who has multiple directorships could be beneficial to the firm if his/her external board seats are perceived as enhancing 'social capital'(Johansen and Pettersson, 2013). Indeed, several studies examine

[34]However, interlock-financial performance relationship was subject to the performance measurement used. That is, presence of interlocked directorates is negatively associated with firms' ROA, but not Tobin's Q.

[35]Interestingly, the strength of this negative consequence is subject to the amount of created workload, which varies according to the relative importance of directors' roles and the number of NEDs.

the potentially beneficial impact of multiple directorships on different aspects of firm performance (Kaczmarek, Kimino, and Pye, 2014). Most of these studies are built on the resource-dependence theory (Pfeffer and Salancik, 1978) that suggests firms are constrained by their dependence on external relationships. In this view, multiple directorships can be seen as a meaningful organisational mechanism that benefit both the dependent and controlling firms (Hallock, 1997).[36] While the dependent firm reduces its external dependency and uncertainty by getting easier access to the scarce resources (i.e. co-optation), the control firm will exercise influence by having a representative on the dependent firm's board (i.e. corporate control) (Kaczmarek et al., 2014). For instance, using a sample of Australian firms for the financial year ending in 2005, Chen, Dyball, and Wright (2009) found that firms interlocked to other extra-industry firms have a higher level of diversification. According to the authors, interlocks create an "information pathways between corporations and influence corporate strategic choices". Furthermore, Perry and Peyer (2005) found shareholders react favourably when one of the executives on their firm's board is appointed as an NED on other firms as long as this executive is deemed to have a strong motivation to enhance their value.[37]

Other theoretical frameworks have been used to complement the resource approach to the interlocked directorate. Based on the RBV (Barney, 1991) perspective, interlocked firms through their cooperation can obtain competitively advantageous resources (e.g. markets access and capital) and exchange information and knowledge resources (e.g. organisational learning and innovation). Indeed, Harris and Shimizu (2004) found the presence of directors with multiple directorships enhance their firm acquisitions performance, as these directors are "important sources of knowledge" and "represent an important complement" to other types of directors. Mazzola, Perrone and Kamuriwo (2014) argue that interlocking directorate (i.e. personnel network) can overcome certain drawbacks such as

[36] Hallock (1997) argues that interlock phenomenon is due to agency conflicts as "interlocking happens far more often than can be explained by random chance (p.340)".

[37] In their study, the executive is considered have a strong incentive to improve shareholders' value if he/she has high stock ownership or the firm has an independent board. Perry and Peyer (2005) found negative returns for the announcement of executive appointment as a NED only when his/her firm has high agency problems.

information redundancy and lack of specialisation that happen when information is exchanged at the firm level (inter-firm network). In a sample of global firms in the bio-pharmaceutical industry, they found that interlocking directorates improve the effect of firms' alliances on the new product development.

Several other studies examined the effects of interlocking directorates on the general economic and financial performance. Pombo and Gutiérrez (2011) examined the impact of multiple directorships on general firm performance in unregulated environment using the voluntary framework of corporate governance. They found that, in general, the presence of NEDs with multiple directorships had a positive influence on Colombian firms' performance as measured by ROA. In a regulated corporate governance environment, Ferris et al. (2003), using a large sample of American firms, found no correlation between interlock directorates on one hand and lower firms' financial performance (market-to-book ratio), and subjectivity to securities fraud litigation on the other hand. Based on an event study, they also found market players do not view the appointment of "busy" director as a negative event. Furthermore, no evidence was found to support the hypothesis that directors who are sitting on multiple firms' board attend fewer committee meetings compared to other directors who have one board seat.

The reported inconclusive relationship between multiple directorships and firm financial performance over the different international studies is understandable due to the differences in the country-level factors. Peng and Luo (2000) argue, "In an environment where formal institutional constraints such as laws and regulations are weak, informal institutional constraints, such as those embodied in the interpersonal ties cultivated by managers may play a more important role in facilitating economic exchanges and hence assert a more significant impact on firm performance (p.484)".

However, inconclusive results on the relationship between multiple directorships and firm financial performance were also found for studies conducted in the same country, which can be attributed to several reasons. Firstly, the directorships-performance relationship seems to be sensitive to the measurement used for both multiple directorship and performance (Devos et al., 2009; Fich and Shivdasani,

2006). For instance, the use of market-to-book ratio has been criticised as it does not reflect only the added value by top-level managers, but also the value of other intangible assets which is not usually controlled for (Fich and Shivdasani, 2006). Furthermore, market-based measurements have been criticised for being contaminated by the noise in the equity market. Secondly, the negative consequences of NEDs' busyness are not necessarily triggered by the presence of a busy NED on the board but rather when most of the directors on that board are busy (i.e. board busyness). Several studies documented how board busyness can be detrimental to shareholders' value and firm performance (Fich and Shivdasani, 2006; Kaczmarek et al., 2014).

3.4.4.2 Regulatory Requirements on Multiple Directorships

Policymakers and shareholders' associations are usually inclined to limit the number of directorships a director can have. The Combined Code on Corporate Governance (FRC, 2008) states that the boards of UK firms "should not agree to a full-time executive director taking on more than one non-executive directorship in a FTSE 100 company nor the chairmanship of such a company (see § A.4.5)".[38] Similarly, in the US, the Council of institutional investors suggests that directors "with a full-time job should sit on no more than two other boards". The UK Institute of Directors also lists the average number of boards a director sits on as one of the determinants of board effectiveness that could have a negative effect on the quality of corporate governance.

Noteworthy, the UK regulatory limitations on number of directorships mainly targets executive directors who hold 'full time' or demanding positions, and still wailing to serve on other boards (Kiel and Nicholson, 2006). In the UK context, O'Sullivan (2000) found that "executives are not a significant source of non-executive directors in UK companies... only 22% of non-executives in [their]

[38] Although multiple directorships issue is generally regarded as a potential threat to directors' commitment, the UK Department of Trade and Industry Report in 2007 considered "the number of network ties to other firms and external constituencies" as one of the major factors contributing to "good corporate governance".

sample are serving executives in other companies (p.23)". The current study focuses on board busyness rather than individual director busyness. This is in line with the Walker Review's recommendation regarding board busyness in the UK financial sector. The report states that: "The overall time commitment of NEDs as a group on a FTSE 100-listed bank or life assurance company board should be greater than has been normal in the past (p.14)".

3.5. Research Design

3.5.1 Sample

Our sample includes all directors (i.e. EDs and NEDs) sitting on the boards of all the firms listed on the London stock exchange over the period 1999–2014. Spanning over a period of 15 years, the data gives an opportunity to address the objective regarding the extent to which the market has changed including the period after the global financial crisis. The construction of the dataset involved identifying all public listed firms on LSE over the sample period and grouping them into BOFIs and non-financial firms based on the UK standard industrial classification of economic activities (2008). The BOFIs in the sample fall under section K of SIC (Financial and insurance activities) which comprise banks, insurance, investment, life assurance and other financial firms. Then, using the BoardEx database and firms' annual reports, the director years for those firms along with the directors' competencies data and other director-characteristics were collected to construct the board diversity indices.

3.5.2 Variables Construction

3.5.2.1 Board Diversity (BSD, BCD, and BDD) and Size

Board diversity is defined and measured differently in the literature. It can be as narrow as one dimension of diversity (e.g. gender diversity) (Bao, Fainshmidt, Nair, and Vracheva, 2014; Brammer, Millington, and Pavelin, 2009; Minichilli et

al., 2009; Wilson, Wright, and Scholes, 2013) to a range of diversity aspects (Ben-Amar et al., 2013; Kaczmarek et al., 2014). For instance, the broad approach of Kaczmarek et al. (2014) to board diversity was reflected in combining all dimensions of diversity (i.e. age, gender, nationality, education, board tenure and financial background) into one index. As was pointed out earlier, however, lumping different types of diversity into one index has its own limitation. Ben-Amar et al., (2013) avoid this pitfall by distinguishing between different attributes of board diversity by creating two indices; the first one is for BSD reflecting board independence and board leadership duality, and the second index is designed to capture BDD by examining the joint effect of gender, culture or nationality and tenure of board members. Ben-Amar et al., (2013) created the diversity indices by adding scores for each directors' characteristic.

Similarly, an index for each diversity attribute (i.e. BSD, BCD, and BDD) is also created for the purpose of the current study. With respect to BSD, i.e. board statutory diversity, the focus was on board independence, committees' independence, and CEO role duality. Board independence is usually measured as the proportion of the board represented by independent directors (Aebi et al., 2012; Erkens et al., 2012; Lai and Chen, 2012; Melis, Gaia, and Carta, 2015; Minton et al., 2011). Cornett et al. (2009) measure board independence as "the inverse of board size times the ratio of the number of outside directors to the number of affiliated and inside directors (p.8)". Consistent with Chen et al. (2009) and Kaczmarek et al. (2014), the measure of board independence in this study is the proportion of independent NEDs (i.e. NEDs who are reported as independent in a firm's proxy statement) to the total board size.[39] A board is classified as independent if the proportion of independent NEDs is equal to or more than fifty percent. Similarly, committee independence is measured by the proportion of independent NEDs on each board committee. Again, three dummy variables were

[39]Independence of NEDs is measured as a binary variable, hence does not count for the possibility of 'grey' NEDs. Studies that distinguish between 'grey' and 'independent' directors usually collect the data manually from annual reports provided that conflicts of interest are being disclosed (Borokhovich, Boulton, Brunarski, and Harman, 2013; Yermack, 2004). Given the large dataset used, this study strictly classifies a director as independent only if the firm clearly states in the annual report that s(he) is independent, otherwise, the NED is classified as non-independent NED. It is acknowledged as a limitation of this study that not all firms may have followed independence criteria stated in the UK Combined Code on Corporate Governance (FRC, 2008) especially in the earlier sample years.

used which equal to one if the nomination, remuneration, or audit committees comprised of majority (i.e. 50% or more) independent NEDs. Finally, CEO role duality is a dichotomous variable that equals to one if the CEO and Chairman roles are performed by the same director. Consistent with the literature (Ben-Amar et al., 2013; Francoeur, Labelle, and Sinclair-Desgagné, 2008), the board statutory diversity for each firm is ranked based on a comparison to the entire sample.

As regards BCD, i.e. board competitive diversity, an index composed of directors' education level, governance experience, and tenure was constructed. Consistent with Anderson et al., (2011), the diversity of the directors' educational level was measured using Herfindahl index based on the number of educational qualifications each director has relative to the rest of the board. The coefficient of variation for directors' governance experience and tenure capture board diversity on these two dimensions.[40] Again, each board is allocated a diversity score based on the heterogeneity of the entire sample (Anderson et al., 2011). Similarly, BDD, i.e. board demographic diversity, index combines all demographic dimensions of diversity (i.e. directors' gender, nationality (culture familiarity), and age).[41] For directors' gender and nationality (culture familiarity), the Blau's index (1977) was used for these two categorical variables, while the coefficient of variation is used for directors' age.[42]

Finally, board size was measured by the number of directors on the board (Linck, Netter, and Yang, 2008; Mangena, Tauringana, and Chamisa, 2012; Minton et al., 2011).

3.5.2.2 Board Competitive Capital

Compared to board's diversity, board competitive capital received much less systematic attention in prior literature (Anderson et al., 2011). The literature on board composition and group dynamics areas provide some guidance on how board

[40] The coefficient of variation is calculated by dividing the standard deviation by the mean (SD/l).

[41] Since nationality would not replace ethnic background when it comes to examining the effects of cultural differences, the term culture familiarity is used here to capture the director familiarity with the environment.

[42] Blau's index is $(1-\sum p_i^2)$, where p_i is the proportion of group members in each of the (i) categories.

competitive capital can be measured (Forbes and Milliken, 1999; Sundaramurthy and Lewis, 2003). For instance, Anderson et al. (2011) use use the aggregated board of directors' tenure and the number of corporate boards that the directors serve, to measure what they called 'board experience'.

Similarly, Wilson et al. (2013) measure governance experience as the average number of days a typical director on the target firm's board spent since the date of appointment. Also, they measured the average number of days a director on that board spent in the sector (i.e. sector experience). In addition, since witnessing companies' failure can be a unique experience that could prevent future failure, they constructed a ratio of directors who failed in the past.[43] Finally, the average number of directorships per director is used as a proxy for skills, knowledge, and relational capital. For the purpose of the current study, similar to Anderson et al. (2011), board accumulated governance experience is measured by aggregating the total number of boards that each director has worked for in year (t). To account for different board size, the average governance experience per director was calculated by dividing the board accumulated governance experience by its size.

Board educational qualifications have been measured differently in the literature as well. Anderson et al. (2011) use the percentage of directors with no college degree, a bachelor degree only, and masters or above degree. Chen (2014) measures board educational capital by "aggregating the number of years of schooling for a board's members and taking the mean (p .427)". Some other studies focus on a particular type of board knowledge. For instance, when the board financial background is relatively important, financial educational qualifications or financial work experiences are used as a proxy for this specific board knowledge (Minton et al., 2011). Similarly, Aebi et al. (2012) use the percentage of directors with experience (present or past) as an executive officer in a bank or insurance company as a proxy for board financial knowledge. In the current study, board accumulated educational qualifications is measured as the aggregate number of professional and

[43]The number of directors who have witnessed a company failure in the past while they were serving on that company board divided by the target firm board size.

academic (i.e. undergraduate level and above) qualifications that each director has achieved.[44] The average educational qualifications per director is calculated by dividing the board accumulated educational qualifications by its size.

Finally, board network is one of the most important competitive capital to consider if one is to anticipate the effectiveness of boards.[45] Eminet and Guedri (2010), Mazzola et al. (2014), and Renneboog and Zhao (2011) measure the director network by mapping links between different directors who served together on the same company board. Also, the board's aggregate number of directorships and interlocked board are sometimes used as a proxy for board networking competencies (Devos et al., 2009). In the current study, similar to Renneboog and Zhao (2011), board network size is calculated by the total number of people that a director connects with as a proxy for network size. The network size of each director on the target firm's board is aggregated to get the accumulated board network. Then it was divided by the board size to get the average network size per director.

3.5.2.3 Board Busyness

Researchers used different proxies for the busyness of directors (CEOs, EDs, and NEDs) and boards, which yield different results on the firms' or boards' performance. While there is no consensus on the number of directorships that may affect directors' due diligence (i.e. threshold of busyness), most of the studies consider director with three board seats or more to be busy (Fich and Shivdasani, 2006).

The beneficial consequences of having directors with multiple directorships on firms' board, as highlighted by resource-based theories, have refocused the attention toward the busyness of board as a group rather than individuals. That

[44] Given the large dataset and reliance on BoardEx for information, the identification of more specific industry qualifications such as banking, risk management, economics, etc was not feasible. This is only possible if data is collected manually.

[45] Board network capability, sometimes called relational or social capital, refers to "the sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit" (Nahapiet and Ghoshal, 1998)

is, the harmful consequences of busyness are not triggered by the presence of a busy director on the board but rather when the majority of directors on that board are busy to exercise their duties diligently. Therefore, the current study focuses on firms' board busyness rather than individual director busyness.

The literature suggests that the effect that board busyness might have on firm performance seems to be sensitive to how busy directors are identified. Hence, four different measurements are used in the current study to assess board busyness. Firstly, the average number of directorships held by all the directors of a given firm is calculated, and then the board of that firm is considered busy if the mean is equal to or more than three directorships (Board Busyness 1), similar to the approach by Ferris et al., (2003). The second measure (Board Busyness 2) does the same but it limits the board busyness to only NEDs by taking the average number of NEDs' directorships, also similar to Ferris et al., (2003). The third and fourth measures (Board Busyness 3 4) follow the study of Fich and Shivdasani (2006) by considering the firm's board to be busy if the majority of the board's directors and NEDs are busy respectively.[46] Appendix C provides an illustrative example of how each measurement of director's and board's busyness is constructed. Table 3.3 provides a summary of the operationalisation of the various measures used in this study.

3.6. Data Analysis and Findings

3.6.1 Descriptive Statistics

Table 3.4 (see page 83) presents descriptive statistics for the characteristics of all directors' sitting on boards of UK plcs between 1999 to 2014. The table further compares the characteristics of EDs to those of NEDs.

[46] In sum, the difference between the first two and the second two measurements is that the later consider boards busy if 50% or more of NEDs have three or more directorships instead of using their average number of board seats to judge boards busyness.

Table 3.3
Operationalisation of the Variables

BOARD LEVEL VARIABLES		
Variable	**Description**	**Source**
Board Diversity Indices		
Board Statutory Diversity Index (BSD)	Board Statutory Diversity (BSD) is a score index based on adding points for *two dimensions* that enhance the level of statutory diversity of the board. • The first one is CEO role duality which is a dichotomous variable the equals 0 if CEO is also chairperson (0 mark) and 1 if not (1 mark). • The second characteristic is the board independence diversity. This is operationalised with Blau's (1977) heterogeneity index ($1-\sum p_i^2$), where p_i is the proportion of group members in each of the (i). The sample is then split into four terciles to rank firm's board independence diversity level accordingly (First tercile: 1mark, Second tercile: 2 mark, Third tercile: 3 marks, Fourth tercile: 4 marks). The BSD index ranges between 1 (lowest) to 5 (highest) (for comparisons purposes, tables show value ranging between 0 to 4).	Annual Reports, BoardEx
Board Competitive Diversity Index (BCD)	Board Competitive Diversity (BCD) is a score index composed of *four dimensions*; directors' education level, financial expertise, governance experience and tenure. • The diversity of the directors' educational level is operationalised using Herfindahl index based on the number of educational qualifications each director has relative to the rest of the board. • The diversity of the directors' financial expertise is operationalised with Blau's (1977) heterogeneity index to capture the percentage of directors with financial experience based on having past CFO/FD role. • Directors' governance experience diversity and tenure diversity are operationalised by using the coefficient of variation (SD/l) for each one. Similar to the previous index, the sample is then split into four terciles to rank firm's diversity level on each dimension accordingly. The BCD index ranges between 4 (lowest) to 16 (highest) (for comparisons purposes, tables show value ranging between 0 to 12).	Annual Reports, BoardEx
Board Demographic Diversity Index (BDD)	Board Demographic Diversity (BDD) is a score index composed of *three demographic dimensions* of diversity (i.e. directors' gender, nationality, and age). • The heterogeneity of directors' gender and nationality is operationalised with Blau's index (1977). • Directors' age diversity is measured using the coefficient of variation. Similar to previous indices, the sample is then split into four terciles to rank firm's diversity level on each dimension accordingly. The BDD index ranges between 3 (lowest) to 12 (highest) (for comparisons purposes, tables show value ranging between 0 to 9).	Annual Reports, BoardEx
Board Competitive Capital		
Board Governance Experience	Total board governance experience is measured by aggregating the total number of boards that each director has worked for in year (t). The average governance experience per director is calculated by dividing the total board's governance experience by its size.	BoardEx
Board Educational Qualifications	Total board educational qualifications is measured as the aggregate number of professional and academic (i.e. undergraduate level and above) qualifications that each director has achieved. The average educational qualifications per director is calculated by dividing the total board's educational qualifications by its size.	BoardEx

Table 3.3 ***(Continued)***
Operationalisation of the Variables

Board Network Size	Total board network size is operationalised with the aggregate number of people that each director connects with. The average network size per director is calculated by dividing the total board network size by the board size	BoardEx
Board Busyness and Workload		
Board Busyness 1	Dichotomous variable the equals one if the average number of directorships held by all the directors of a given firm is equal to or more than three directorships.	BoardEx
Board Busyness 2	Dichotomous variable the equals one if the average number of directorships held by only NEDs of a given firm is equal to or more than three directorships.	BoardEx
Board Busyness 3	Dichotomous variable the equals one if the majority of the directors of a given firm are classified as busy. A director is considered busy if (s)he holds three or more directorship.	BoardEx
Board Busyness 4	Dichotomous variable the equals one if the majority of the NEDs of a given firm are classified as busy. A director is considered busy if (s)he holds three or more directorship.	BoardEx
Board Busyness 5	This measure uses the same method used in board busyness 3, however it calculates the number of directorships differently by considering the workload that each post (directorship) may require. Specifically, one chairmanship post calculated as three directorships and one deputy chairmanship is considered equal to two directorships.	BoardEx
Other Firm Related Variables		
Board Size	Board size is measured by the number of directors on the board in a given year.	BoardEx
Firm Size (ln TA).	Natural log of total assets. Numbers are inflation adjusted.	Datastream
Market adjusted stock return	The BOFI's annual stock return, net of the FTSE All Shares index.	Datastream
ROE	The BOFI's annual return on equity.	Datastream
DIRECTOR LEVEL VARIABLES		
Number of board seats in quoted firms	The total number of board seats held by NEDs in quoted firms on the report date selected.	BoardEx
Educational qualifications	NED's total number of professional and academic qualifications in year (t).	BoardEx
Social networks	NED's total number of connections with other directors, whether past or present via their directorships. These links are captured through detecting a date overlap of directors sitting on boards, whether quoted, private, not for profit, or other. This is the method used by BoardEx in identifying number of social networks.	BoardEx
Tenure, Age and Gender	Tenure is measured by the number of years spent by the NED in the focal financial firm. Age is NED's age in a particular year (t). Gender is a dummy variable that equals to 1 if the NED is a female, 0 otherwise.	BoardEx
Independence	A dummy variable that equals to 1 if the NED is reported as independent in the firm's annual report in a given year, 0 otherwise.	BoardEx, Annual reports

Data in Table 3.4 shows an overall compliance with corporate governance codes at the directors' level. Both t-test and Wilcoxon test indicates the characteristics of executives and non-executives based on various aspects to be significantly differently (at the p = 0.01 level). Firstly, the clear majority of executives do not hold other board seats on other quoted firms (see average for ED is 1.13) in compliance with the UK governance code (see the Code (2010) § A.4.5), while NEDs hold, on average (1.83), two non-executive posts on UK quoted firms. Due to the demanding requirements of their posts, one may expect that executives will have less time available for other directorships. Noteworthy, a closer look at the nature of these NEDs' additional board seats showed that around 93% of their external seats are non-executive posts. Consistent with the study of O'Sullivan (2000)[47], our sample indicates that EDs are not a significant source of NEDs in the UK PLCs.[48]

Secondly, between 4% to 10% of executives in the sample have a membership in one of the three board committees, compared to a range of 53% to 69% for NEDs. This indicates that NEDs are the main source for different board committees' membership as encouraged in the governance practice (see the Code (2010) § C.3). In addition, 68% of NEDs are classified as independent by the firms and they keep their seats for less than six years (see the Code (2010) § A.7.2).[49] Executives' tenure on average is close to 6 years. Finally, chairmanship position is more common among NEDs (21%) compared to executives (9%) which may indicate a good level of independence in UK firms' leadership. In terms of directors' individual competencies, NEDs are significantly more skilled based on various measures (i.e. governance experience, number of educational qualifications, and social networking). This could be due to several reasons. For instance, as mentioned earlier, NEDs are sitting on more board seats, hence they accumulate more experience

[47] Using a relatively small sample of 175 UK quoted companies on the 1995 financial year, O'Sullivan (2000) reported that only 22% of non-executives in his sample are serving executives in other companies.

[48] To facilitate comparison, these observations were dropped - where a director is working as an executive in one company and as non-executive in another company - from Table 3.4. The total number of the dropped observations is 7,583 director-years.

[49] Any term beyond six years (e.g. two three-year terms) for a non-executive director should be subject to particularly rigorous review.

Table 3.4
Characteristics of Directors (NEDs Vs. EDs) Sitting on the Boards of UK PLCs between 1999-2014 (Director Level)

Variables	**Non-executive directors**						**Executive directors**						**Mean-Comp. Tests**	
	Obs.	**Mean**	**Std. Dev.**	**5th**	**50th**	**95th**	**Obs.**	**Mean**	**Std. Dev.**	**5th**	**50th**	**95th**	**T**	**Wilcoxon**[a]
Current Number of Quoted Board Seats	49,544	1.83	1.33	1	1	4	43,342	1.13	0.48	1	1	2	**	**
Audit Committee Membership	51,124	0.69	0.46	0	1	1	44,872	0.04	0.20	0	0	0	**	**
Remuneration Committee Membership	51,124	0.67	0.47	0	1	1	44,872	0.05	0.21	0	0	0	**	**
Nomination Committee Membership	51,124	0.53	0.50	0	1	1	44,872	0.10	0.30	0	0	1	**	**
Tenure in the board (years)	49,555	5.16	5.37	0.3	3.7	14.8	43,360	5.70	5.89	0.3	3.8	17.9	**	**
Independence (Independent director)	51,124	0.68	0.47	0	1	1	44,872	0.00	0.00	0	0	0	**	**
Chairman or Vice-Chairman	51,124	0.21	0.40	0	0	1	44,872	0.09	0.29	0	0	1	**	**
Governance experience (seats)	49,546	3.38	3.05	1	2	9	43,345	1.55	1.24	1	1	4	**	**
Governance experience (years) [b]	48,713	3.06	3.86	0	2	10.1	42,363	0.98	2.65	0	0	5.6	**	**
Educational Qualifications Resources	49,555	1.65	1.31	0	2	4	43,360	1.36	1.14	0	1	3	**	**
Social Networking Resources	51,124	520.90	729.72	10	226	2113	44,872	351.39	621.77	9	84	2030	**	**
Director's age (years)	49,232	57.94	8.83	42	59	71	42,917	49.56	8.18	37	49	63	**	**
Gender (Female director)	49,555	0.08	0.27	0	0	1	43,360	0.05	0.22	0	0	1	**	**
Nationality (Non-British director)	44,811	0.19	0.40	0	0	1	37,921	0.13	0.33	0	0	1	**	**

[a]Although t-test is one of the most popular techniques, it assumes that the variable in question is normally distributed in the two groups. On the other hand, Wilcoxon-Mann-Whitney (sometimes called rank sum) is non-parametric test that can be used as an alternative to the t-test when distributional assumptions are in question.

[b]Governance experience (seats) is based on number of seats in quoted Firms. Governance experience (years) is based on number of years in quoted Firms.

and build a bigger network (e.g. NEDs on average is connected to 521 other director, compared to only 351 for EDs). In addition, NEDs are significantly (at the p = 0.01 level) older, on average, than executives. The average NED (EDs) is 58 (49) years old indicating that most NEDs are in the later stage of their careers, hence it is unsurprising for NEDs to be more experienced. NEDs also seem to be more diverse with 8% and 19% of directors in the sample are females and of foreign nationality, respectively.

Table 3.5 presents corporate governance characteristics and financial performance of the UK financial and non-financial listed firms in the sample. BOFIs are usually distinguished in corporate governance literature due to their particularities (e.g. heavy regulation and governmental intervention), hence a distinct analysis of their corporate governance issues may be required (Aebi et al., 2012). Overall, BOFIs show more compliance with corporate governance 'best practices'. Over the last fourteen years (1999-2014), the Wilcoxon tests indicate significant differences between the two groups in terms of the various aspects of corporate governance. Compared to non-financial firms (NFFs), BOFIs have lower incidence of role duality (mean of 19% as opposed to 27% for NFFs) and remuneration committee independence (mean of 52% as opposed to 67% for NFFs). However, BOFIs have higher board independence (mean of 55% as opposed to 34% for NFFs), audit committee independence (mean of 79% as opposed to 68% for NFFs) and nomination committee independence (mean of 57% as opposed to 42% for NFFs). The skewness, as shown by the difference between mean and median, of CEO role duality and boards committees' independence indicates that certain boards tend to be more compliant with corporate governance codes.[50]

[50] Using skewness/kurtosis tests for normality, the skewness of CEO role duality and boards committees' independence is not driven by the sub-sectors' difference.

Table 3.5
Summary Statistics and Characteristics of the UK PLCs Between 1999-2014 (Firm Level)

Variables	UK Non-Financial PLCs						UK Public Listed BOFIs						Wilc-oxon Tests
	Obs.	Mean	Std. Dev.	5th	50th	95th	Obs.	Mean	Std. Dev.	5th	50th	95th	
Panel A: the UK public listed firms' Corporate Governance Characteristics between 1999-2014													
Duality	14,472	0.27	0.45	0.00	0.00	1.00	3,272	0.19	0.40	0.00	0.00	1.00	**
Board Size	14,472	6.49	2.40	3.00	6.00	11.00	3,272	6.48	3.15	3.00	6.00	13.00	**
Board Independence	14,472	0.34	0.24	0.00	0.38	0.67	3,272	0.55	0.35	0.00	0.58	1.00	**
Audit Committee Independence	13,570	0.68	0.41	0.00	1.00	1.00	3,092	0.79	0.36	0.00	1.00	1.00	**
Remuneration Committee Independence	13,570	0.67	0.41	0.00	1.00	1.00	3,092	0.52	0.46	0.00	0.67	1.00	**
Nomination Committee Independence	13,570	0.42	0.41	0.00	0.50	1.00	3,092	0.57	0.43	0.00	0.75	1.00	**
Panel B: the UK public listed firms' Financial Performance and Size between 1999-2014													
Market Adjusted Stock Return	12,631	-12.0%	52.0%	-112.0%	-4.5%	62.0%	2,998	-6.6%	39.0%	-82.0%	0.1%	43.0%	**
Return on Equity (ROE)	12,178	-5.0%	45.0%	-95.0%	5.8%	41.0%	2,862	2.2%	35.0%	-47.0%	5.1%	39.0%	**
Total Assets (£million)	13,554	£1,289	£8,048	£1.7	£50	£4,444	3,068	£26,699	£158,125	£1.8	£142	£65,489	**

Level of significance for mean differences are ***:0.01, **:0.05, *:0.1.
Noteworthy that the average of firm return include the numbers for all firms regardless of their performance or size. It also includes firm returns during the financial crisis.

3.6.2 Univariate Analysis

3.6.2.1 Change in Board Diversity Attributes (BSD, BCD, and BDD)

This section will cover the first research question (RQ1a) for the first research objective (see introduction of this chapter). Specifically, it will answer this question:

> ***Are there significant changes on the diversity attributes (i.e. statutory, competitive, and demographic) of boards of companies listed in the UK over the last fifteen years?***

Table 3.6 (see page 88) provides an overview of the extent to which boards of the UK listed firms are diversified based on three diversity attributes (i.e. BSD, BCD, and BDD) over a period of 15 years (1999-2014). Panel A presents the descriptive statistics for individual diversity criteria on the board level, while panel B presents the three main aggregate indices of diversity.

In panel A, the audit committee have the highest independence average percentage of 70%, while the average size of the audit committee is three. This is consistent with the UK Combined Code (FRC, 2008) that suggests that the audit committee need to be composed of at least three independent NEDs.[51] Similarly, the average size of the remuneration committee is three as recommended by the UK Combined Code (FRC, 2008). However, it does not specify a certain number of directors for the composition of nomination committee which may explain why the nomination committee has a relatively higher average of directors. Also, the independence of nomination committees is lower compared to the other two committees which may reflect the regulators' relative emphasis on the independence of these two committees compared to the nomination committee over the years.

Overall, the median board size is six directors. Figure 3.2 reveals that there has been a steady fall in the board size over the last fifteen years. The median

[51] Noteworthy, the independence of audit committee has been emphasised since Smith Report on 2003 (Smith, 2003).

percentage of independent directors on the firm board is 40%, which seems to be less than the recommended guidelines by regulators and corporate governance codes. However, there is an increasing trend of the percentage of independent directors on UK boards since 2007 (see Figure 3.2).

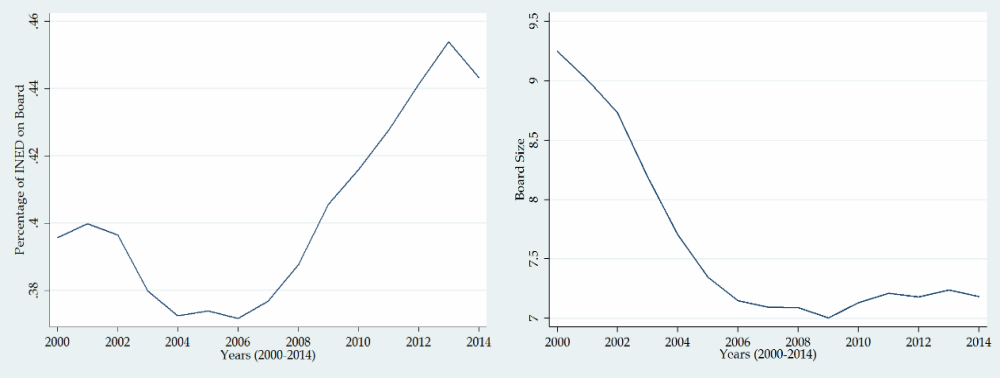

Figure 3.2: The Average Percentage of INED and Board Size of the UK PLC Between 2000-2014

On average, around 47% of directors on each board hold two or more educational qualifications. However, the percentage of directors with past financial expertise is much less with only 6%. Directors usually spend around five years on the firms' board. However, the average and median for directors' tenure must be interpreted with caution as it involves the tenure for both executive and non-executive directors. That is, according to the Combined Code (FRC, 2008) NEDs are expected to spend less than nine years on the firm board to be categorised as independent which is not the case for executive directors.

As Table 3.6 shows, it is apparent that the average age of directors is 54 years old which is not surprising as such role is often offered to more senior individuals. In addition, on a typical UK-listed board, female directors represent 6.2% with 95th percentile equals to 25%, while the percentage of non-British directors is much higher with a mean of 13.7% (see Figure 3.3). However, consistent with the literature (Davidoff et al., 2014), the difference between the median and mean for both gender and nationality (culture familiarity) dimensions suggests that some firms tend to hire more females and international directors than others.

Table 3.6
Board Diversity and Size of UK PLCs over 1999-2014

		N	Mean	Median	Std. Dev.	p5	p95
Panel A: Individual diversity criteria of the UK public listed firms (board level)							
Board Size	Audit Committee Size	16,466	3	3	1.1	2	5
	Remuneration Committee Size	15,653	3	3	1.1	2	5
	Nomination Committee Size	10,508	4	4	1.5	2	7
	Firm Board Size	17,744	6.5	6	2.6	3	11
Diversity	Percentage of INEDs on Audit Committee	16,662	70.0%	100.0%	40.2%	0.0%	100.0%
	Percentage of INEDs on Remuneration Committee	16,662	64.0%	83.3%	42.0%	0.0%	100.0%
	Percentage of INEDs on Nomination Committee	16,662	44.7%	50.0%	41.5%	0.0%	100.0%
	Percentage of INEDs on firms' board	17,744	37.7%	40.0%	27.3%	0.0%	83.3%
	Percentage of directors holding two or more educational qualifications	17,027	46.6%	50.0%	25.7%	0.0%	87.5%
	Percentage of directors with past financial experience	17,744	5.9%	0.0%	9.5%	0.0%	25.0%
	Average number of years a director spends on the firm board	17,098	5.3	4.7	3.5	0.9	11.8
	Average age of directors	17,098	54.4	54.6	4.9	46	62
	Percentage of female directors	17,098	6.2%	0.0%	10.1%	0.0%	25.0%
	Percentage of non-British directors	17,069	13.7%	0.0%	21.7%	0.0%	60.0%
Panel B: Diversity Indices (SD, CD, DD) of the UK public listed firms (board level)							
D. Indices	Statutory Diversity	17,744	2.1	2	1.2	0	4
	Competitive Diversity	17,031	5.3	5	2.3	2	9
	Demographic Diversity	17,058	3.4	3	2.2	0	7

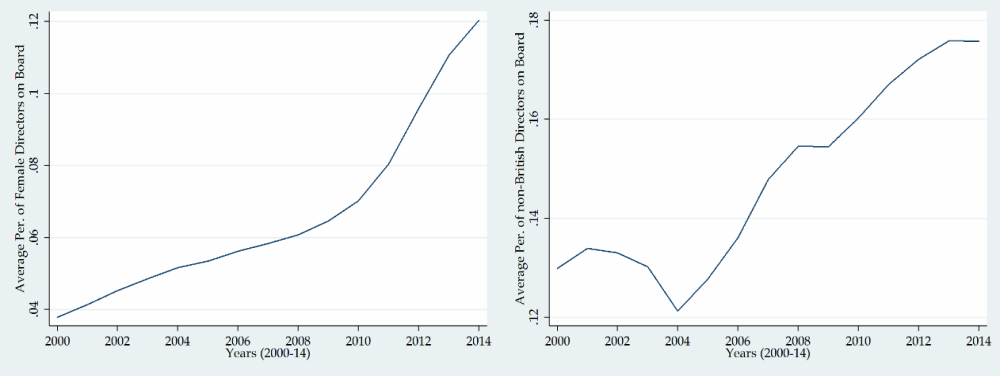

Figure 3.3: The Average Percentage of Female and Non-British Directors on the UK PLC Boards Between 2000-2014

The three main diversity indices (i.e. BSD, BCD, and BDD) are presented in panel B of Table 3.6. As mentioned earlier, the first index is BSD and it has two criteria (i.e. duality and independence) and ranges between zero to four. The median score for BSD in the sample is two. The second index is BCD which reflects four job-related diversity criteria (i.e. education level, financial knowledge, governance experience, tenure). The index takes a value between zero to twelve and the median score for the boards in the sample is five. BDD is the last index considered and the value ranges from a minimum of zero to a maximum value of nine. BDD measures board's diversity regarding age, gender, and culture. The median value for that index is three while the average is 3.4. Table 3.7 presents the distribution of scores including the mean scores for each of the three indices. The mean for BCD is 5.3, BDD is 3.4 and BSD is 2.1.

Table 3.7
Distribution of Observations by Score of the Three Diversity Indices

	Competitive Diversity			**Demographic Diversity**			**Statutory Diversity**		
	Score	**N**	**%**	**Score**	**N**	**%**	**Score**	**N**	**%**
	0	139	0.82	0	1,845	10.82	0	1,631	9.19
	1	543	3.19	1	1,716	10.06	1	4,670	26.32
	2	1,115	6.55	2	2,283	13.38	2	4,212	23.74
	3	2,006	11.78	3	3,822	22.41	3	4,048	22.81
	4	2,598	15.25	4	1,886	11.06	4	3,183	17.94
	5	2,736	16.06	5	2,142	12.56			
	6	2,798	16.43	6	2,158	12.65			
	7	2,088	12.26	7	645	3.78			
	8	1,471	8.64	8	376	2.2			
	9	924	5.43	9	185	1.08			
	10	400	2.35						
	11	170	1						
	12	43	0.25						
Total		17,031			17,058			17,744	
Mean	5.3			3.4			2.1		
Median	5.0			3.0			2.0		
Std.	2.3			2.2			1.2		

3.6.2.2 Board Diversity Attributes Across FTSE Indices

This section will cover the second research question (RQ1b) related to the first research objective (see introduction of this chapter). Specifically, it will answer this question:

Are there significant differences in the board diversity attributes across various FTSE indices?

FTSE100 index comprises the 100 largest firms whose shares are listed on the LSE, while FTSE250 index (15% of UK market capitalisation) comprises the 250 largest, mid-capitalised, firms listed on the LSE after the FTSE100. FTSE350 index is simply combining the previous two indices; the FTSE100 and FTSE250. FTSE SMALLCAP index comprises small-capitalised firms that consist of the 351^{st} to the 619^{th} largest-listed firms. FTSE All-Share combines all three indices, FTSE 100, 250 and SMALLCAP and represents 98-99% of UK market capitalisation. Finally, FTSE Fledgling Index comprises 200 listed firms which is considered to be smaller than their counterparts on the FTSE All-Share.

Analysing and comparing board structure across different indices are important due to the inherent different requirements and responsibilities expected from each index. For instance, the UK corporate governance codes require FTSE100 and FTSE250 indices to disclose the 'independence' status for each NED, while FTSE SMALLCAP are excluded from this provision. Also it states that the boards of UK firms "should not agree to a full-time executive director taking on more than one non-executive directorship in a FTSE 100 company nor the chairmanship of such a company (see § A.4.5)". Walker Review also states that; "the overall time commitment of NEDs as a group on a FTSE 100-listed bank or life assurance company board should be greater than has been normal in the past (p.14)". In addition to all differences in regulatory requirements, not all FTSE indices receive the same pressure from media and shareholder. Hence, it is imperative to distinguish between UK different indices when analysing and comparing corporate governance issues.

In the following two tables, we explore the differences in terms of board size and diversity across FTSE indices . Table 3.8 presents the descriptive statistics for board size for the five FTSE indices while Table 3.9 is related to board diversity.

It is apparent from Table 3.8 that, consistent with the previous literature, the size of firms' boards and their committees' size increase with the firms' size. Boards of large firms normally deal with more complex decisions, hence they may

Table 3.8
Board Size across the FTSE UK Index Series over 1999-14

	Variables	***N***	***Mean***	***Median***	***Std. Dev.***	***p5***	***p95***
FTSE 100	Audit Committee Size	1,088	4.1	4.0	1.2	3.0	6.0
	Remuneration Committee Size	1,088	4.3	4.0	1.2	3.0	6.0
	Nomination Committee Size	1,071	5.2	5.0	1.9	3.0	9.0
	Firm Board Size	1,089	11.0	11.0	2.7	7.0	16.0
FTSE 250	Audit Committee Size	2,159	3.6	3.0	0.9	2.0	5.0
	Remuneration Committee Size	2,029	3.7	4.0	1.0	2.0	6.0
	Nomination Committee Size	2,026	4.6	5.0	1.4	3.0	7.0
	Firm Board Size	2,185	8.2	8.0	2.3	5.0	12.0
FTSE SMALL CAP	Audit Committee Size	2,238	3.6	3.0	1.0	2.0	5.0
	Remuneration Committee Size	1,715	3.5	3.0	1.0	2.0	5.0
	Nomination Committee Size	1,992	4.3	4.0	1.2	3.0	6.0
	Firm Board Size	2,256	6.6	6.0	1.9	4.0	10.0
FTSE FLED-GLING	Audit Committee Size	609	2.9	3.0	0.9	2.0	4.0
	Remuneration Committee Size	524	3.1	3.0	0.9	2.0	5.0
	Nomination Committee Size	471	3.7	4.0	1.1	2.0	5.0
	Firm Board Size	629	5.8	5.0	2.0	3.0	9.0
FTSE ALL SHARE	Audit Committee Size	5,281	2.5	2.0	0.8	1.0	4.0
	Remuneration Committee Size	5,278	2.5	2.0	0.8	1.0	4.0
	Nomination Committee Size	2,157	3.1	3.0	1.1	2.0	5.0
	Firm Board Size	5,834	5.4	5.0	1.7	3.0	8.0

need bigger boards. The average board size for FTSE100 is 11 compared to only 6 directors in the case of FTSE FLEDGLING, while the board size for FTSE250 falls between these two indices with an average of 8 directors. Similarly, the size of the three board major committees (i.e. audit, remuneration, nomination) decreases as firms get smaller. For instance, the average size of remuneration committee form firms in FTSE100 is 4.3, which is considerably larger than the average size of 3.5 and 3.1 for firms in the FTSESMALL and FTSE FLEDGLING, respectively.

Table 3.9 illustrates how the various board diversity vary from firm to firm according to the stock market indices. Regarding board's and its committees' independence, it is apparent that different committees get less independent as firms get smaller. For instance, the average percentage of independent directors on FTSE 100 firms' nomination and remuneration committees are 77.7% and 94.5%,respectively which is unsurprisingly higher than FTSE Fledgling firms that have an

Table 3.9
Board's Diversity Across the FTSE UK Index Series Over 1999-14

	Variables	*N*	*Mean*	*Median*	*Std. Dev.*	*p5*	*p95*
FTSE 100	Percentage of INEDs on Audit Committee	1,088	96.4%	100.0%	10.0%	75.0%	100.0%
	Percentage of INEDs on Remuneration Committee	1,088	94.5%	100.0%	11.7%	66.7%	100.0%
	Percentage of INEDs on Nomination Committee	1,088	77.7%	80.0%	19.7%	42.9%	100.0%
	Percentage of INEDs on firm's board	1,089	55.7%	55.6%	12.6%	33.3%	75.0%
	Percentage of directors holding two or more educational qualifications	1,072	67.6%	69.2%	18.8%	33.3%	93.3%
	Percentage of directors with past financial experience	1,089	10.9%	10.0%	9.2%	0.0%	27.3%
	Average number of years a director spends on the firm board	1,089	5.3	5.0	2.3	2.0	9.7
	Average age of directors	1,089	56.1	56.2	2.8	51.5	60.3
	Percentage of female directors	1,089	11.7%	10.0%	10.0%	0.0%	30.0%
	Percentage of non-British directors	1,089	23.2%	20.0%	21.0%	0.0%	63.6%
FTSE 250	Percentage of INEDs on Audit Committee	2,164	94.2%	100.0%	15.8%	66.7%	100.0%
	Percentage of INEDs on Remuneration Committee	2,164	87.5%	100.0%	27.6%	0.0%	100.0%
	Percentage of INEDs on Nomination Committee	2,164	72.8%	75.0%	27.2%	0.0%	100.0%
	Percentage of INEDs on firm's board	2,185	54.5%	50.0%	19.3%	27.3%	100.0%
	Percentage of directors holding two or more educational qualifications	2,181	54.1%	55.6%	21.9%	16.7%	87.5%
	Percentage of directors with past financial experience	2,185	9.8%	10.0%	10.2%	0.0%	28.6%
	Average number of years a director spends on the firm board	2,185	6.0	5.5	3.4	1.4	11.2
	Average age of directors	2,185	55.5	55.6	3.9	48.8	61.7
	Percentage of female directors	2,185	8.2%	0.0%	10.2%	0.0%	28.6%
	Percentage of non-British directors	2,185	12.9%	0.0%	17.7%	0.0%	50.0%
FTSE SMALL	Percentage of INEDs on Audit Committee	2,242	92.8%	100.0%	17.5%	60.0%	100.0%
	Percentage of INEDs on Remuneration Committee	2,242	68.4%	100.0%	41.5%	0.0%	100.0%
	Percentage of INEDs on Nomination Committee	2,242	74.3%	80.0%	32.1%	0.0%	100.0%
	Percentage of INEDs on firm's board	2,256	62.1%	57.1%	25.5%	25.0%	100.0%
	Percentage of directors holding two or more educational qualifications	2,249	46.0%	44.4%	23.8%	0.0%	83.3%
	Percentage of directors with past financial experience	2,256	8.3%	0.0%	10.6%	0.0%	25.0%
	Average number of years a director spends on the firm board	2,256	6.5	6.0	3.3	1.9	12.2
	Average age of directors	2,256	56.5	56.2	4.2	49.9	64.0
	Percentage of female directors	2,256	8.8%	0.0%	12.0%	0.0%	33.3%
	Percentage of non-British directors	2,256	9.3%	0.0%	16.7%	0.0%	44.4%

Table 3.9 ***(Continued)***
Board's Diversity Across the FTSE UK Index Series Over 1999-14

FTSE FLEDGLING	Percentage of INEDs on Audit Committee	611	91.2%	100.0%	19.2%	50.0%	100.0%
	Percentage of INEDs on Remuneration Committee	611	72.7%	100.0%	35.7%	0.0%	100.0%
	Percentage of INEDs on Nomination Committee	611	60.0%	75.0%	37.6%	0.0%	100.0%
	Percentage of INEDs on firm's board	629	52.6%	50.0%	23.4%	12.5%	100.0%
	Percentage of directors holding two or more educational qualifications	627	39.2%	40.0%	25.6%	0.0%	80.0%
	Percentage of directors with past financial experience	629	6.7%	0.0%	10.4%	0.0%	25.0%
	Average number of years a director spends on the firm board	629	7.8	7.2	4.1	2.1	16.1
	Average age of directors	629	56.9	56.9	4.6	49.5	64.6
	Percentage of female directors	629	5.2%	0.0%	9.0%	0.0%	25.0%
	Percentage of non-British directors	629	6.9%	0.0%	15.0%	0.0%	40.0%
FTSE AIM ALL SHARE	Percentage of INEDs on Audit Committee	5,372	49.5%	50.0%	43.7%	0.0%	100.0%
	Percentage of INEDs on Remuneration Committee	5,372	48.8%	50.0%	43.3%	0.0%	100.0%
	Percentage of INEDs on Nomination Committee	5,372	21.1%	0.0%	34.7%	0.0%	100.0%
	Percentage of INEDs on firm's board	5,834	23.6%	22.2%	22.4%	0.0%	60.0%
	Percentage of directors holding two or more educational qualifications	5,815	43.0%	40.0%	25.4%	0.0%	83.3%
	Percentage of directors with past financial experience	5,834	3.2%	0.0%	7.4%	0.0%	20.0%
	Average number of years a director spends on the firm board	5,834	4.9	4.2	3.6	0.7	12.0
	Average age of directors	5,834	53.8	54.0	5.2	44.9	62.0
	Percentage of female directors	5,834	4.5%	0.0%	9.3%	0.0%	25.0%
	Percentage of non-British directors	5,828	13.9%	0.0%	22.7%	0.0%	66.7%

average of 60% and 72.7%. Indeed, FTSE100 firms are expected to be more compliant to the corporate governance codes as they are subject to greater monitoring by regulators, media, and shareholders, compared to firms in the other indices.

Overall, the average (median) percentage of independent directors on the boards of FTSEs' firms are around 41% (43%) over a period of fifteen years (i.e. 1999-2014) with the board composition of independent directors steadily increasing over the years (see Figure 3.2). FTSE100 firms have a higher average representation of independent directors (56%) than most other indices, except for FTSE SMALL CAP firms which have the highest percentage of INEDs on firms' board (62%). Noteworthy, the average percentage of independent directors on firms' board are influenced by the board size which is considerably higher for FTSE100 firms (i.e. 11 directors) compared to FTSE SMALL CAP (i.e. 6 directors). Hence, the average percentage of independent boards across firms' years is also calculated by classifying a board to be only independent if the INEDs represent more than 50% of that board. It is found that among FTSE100 firms the average percentage of independent boards is 60% which is slightly higher than FTSE SMALL CAP firms that have 58% independent board on average.

With regard to directors' knowledge, an average, board of FTSE100 excels with about 70% (11%) of its directors have two or more educational qualifications (past financial expertise). In addition, it can be seen that these percentages decrease when moving down to other indices. For instance, the median percentage for directors with two or more educational qualifications in FTSE FLEDGLING boards is thirty percent less, while the median of directors with past financial expertise is 0.0% for both FTSE SMALL CAP and FTSE FLEDGLING. One possible explanation is that boards of firms at top indices need to deal with complex decisions and financial requirements which require the strong presence of such directors.

Interestingly, the average number of years a typical director spends on board seems to be considerably less for large firms (e.g. FTSE 100) compared to small firms (e.g. FTSE FLEDGLING). This reflects the Combined Code recommendations regarding re-election interval which is one year for FTSE100 firms and three years for other firms. It also reflects the restriction on FTSE100 firms when it comes to governance polices which recommend that independent directors should serve no more than six years. Also, governance codes urge firms to consider the need for progressive refreshing of the board. On the other hand, the average age (i.e. 56) for directors does not seem to vary much across the UK different FTSE indices.

The table also shows that female and non-British directors are more represented (i.e. 12% and 23%, respectively) in FTSE100 boards than other indices'. The minority representation seems to decline from top indices to medium and smaller ones. A possible explanation is that large firms (e.g. FTSE100 firms) have greater media exposure, hence directors from minority groups are more represented for marketing purposes. Another possible explanation is large firms in LSE tends to be globe leading international companies with board of directors with different nationalities. Finally, the average age for directors does not seem to vary much across the UK different FTSE indices.

Table 3.10 (see page 97) presents the distribution of all three diversity indices (i.e. BSD, BCD, and BDD) by the FTSE UK Index Series in panels A, B, and C, respectively, based on aggregate. Panel A suggests that FTSE100 firms utilise the highest level of BSD (mean 3) among the FTSE UK Index Series, followed by FTSE250 firms (mean 2.8), FTSE SMALL firms (mean 2.3), and FTSE FLEDGLING firms (mean of 2.4). The table also indicates that the difference between BSD scores among these groups of firms is statistically significant at level 1%. However, one exception is the difference between firms of FTSE SMALL and firms of FLEDGLING, which is not significant. Overall, results shown in panel A suggest that top firms are more committed to the statutory diversity criteria as promoted by corporate governance codes.Panel B shows the level of BCD among the FTSE UK Index Series. Again, FTSE100 firms exhibit the highest BCD mean with a score of 6.2. However, it is not statistically different than the level of BCD of FTSE250 or FTSE SMALL firms. In contrast, the BCD mean of firms in FTSE FLEDGLING is significantly less than all other FTSE Series (at the 1% level). Panel D combines firms of FTSE100 with firms of FTSE250 (i.e. FTSE350) and compare to another group of firms composed of FTSE SMALL and FLEDLING. Results show that BCD level are significantly less in the latter group of firms. Finally, panel C presents the BDD level between these different groups of firms. Similar to BSD and BCD levels, FTSE100 firms utilise the highest level of DD (mean 4.8) compared to other groups; FTSE250 firms have a mean level of 3.6 and FTSE FLEDGLING firms have a mean level of 2.8. The differences in the BDD mean scores between these groups of firms are statistically significant at the 1% level.

In summary, these results show that the FTSE UK Index Series has a significant association with the extent to which a firm's board is diversified. The board's diversity seems to gradually decrease as firms get smaller. Again, that might reflect the association between firm size, media exposure, legitimacy seeking behaviour on one hand and the board openness and diversity on the other hand.

Table 3.10
Descriptive Statistics of Board Diversity Indices and Comparisons of Group Means by the FTSE UK Index Series over 1999-14

One-way ANOVA				Scheffe multiple group comparisons: row mean - column mean (p value)			
	Mean	***Std. Dev***	***Frequency***	***FTSE 100***	***FTSE 250***	***FTSE SMAL***	***FTSE FLEDG***
Panel A: Statutory Diversity							
FTSE100	3.0	0.9	1,089				
FTSE 250	2.8	1.1	2,185	-0.183 0.001***			
FTSE SMALL	2.3	1.1	2,256	-0.649 0.000***	-0.466 0.000***		
FTSE FLEDGLING	2.4	1.0	629	-0.546 0.000***	-0.364 0.000***	0.102 0.429	
FTSE ALL SHARES	1.8	1.2	5,834	-1.194 0.000***	-1.012 0.000***	-0.546 0.000***	-0.648 0.000***
Source Between Groups	df 4	F 469.060	Prob >F 0.000				
Panel B: Competitive Diversity							
FTSE100	6.2	1.9	1,088				
FTSE 250	6.2	2.1	2,178	-0.068 0.947			
FTSE SMALL	6.1	2.2	2,253	-0.128 0.623	-0.060 0.930		
FTSE FLEDGLING	5.6	2.4	629	-0.577 0.000***	-0.509 0.000***	-0.449 0.000***	
FTSE ALL SHARES	4.6	2.1	5,800	-1.603 0.000***	-1.535 0.000***	-1.475 0.000***	-1.026 0.000***
Source Between Groups	df 4	F 361.890	Prob >F 0.000				
Panel C: Demographic Diversity							
FTSE100	4.8	1.9	1,089				
FTSE 250	3.	2.0	2,185	-1.135 0.000***			
FTSE SMALL	3.2	2.3	2,25	-1.595 0.000***	-0.460 0.000***		
FTSE FLEDGLING	2.8	2.0	627	-1.960 0.000***	-0.826 0.000***	-0.35 0.005***	
FTSE ALL SHARES	3.2	2.1	5,824	-1.553 0.000***	-0.418 0.000***	0.042 0.957	0.407 0.000***
Source Between Groups	df 4	F 154.00	Prob >F 0.000				

Panel D: T-test for the difference between FTSE350 and FTSE SMALL & FLEG

D. Indices	***FTSE 350***			***FTSE SMALL & FLED***			***T-Test***
	N	***Mean***	***Median***	***N***	***Mean***	***Median***	***Sig.***
Statutory Diversity	3,274	2.9	3.0	2,885	2.4	2.0	**
Competitive Diversity	3,266	6.3	6.0	2,882	6.0	6.0	**
Demographic Diversity	3,274	4.0	4.0	2,883	3.1	3.0	**

Level of significance for mean differences are ***:0.01, **:0.05, *:0.1.

3.6.2.3 Board Diversity Attributes Before and After the Financial Crisis

This section will cover the third research question (RQ1c) for the first research objective (see introduction of this chapter). Specifically, it will answer this question:

Are there significant differences in the board diversity attributes before and after the financial crisis?

In Table 3.11 to Table 3.13, the effect of the financial crisis, if any, on the UK listed firms' board regarding their size and diversity is explored. Since BOFIs were at the heart of the financial crisis and they were the target of several post-crisis regulations, hence the sample is further split into two subsamples: UK non-financial firms in panel (A) and UK BOFIs in panel (B).

Table 3.11 compares the average board size and its main committees' size pre- and post the financial crisis. On the one hand, post-crisis, all three board's committees of UK non-financial firms witnessed a decrease in the number of directors, mirroring a general trend of decrease in the average board size. On the other hand, while the average boards size of BOFIs also decreased after the crisis, its three committees did not witness any significant change in size. In fact, the average size of both audit and remuneration committees in BOFIs increased but the difference is not statistically significant. One possible explanation for the discrepancy between non-financial firms and BOFIs with respect to audit committee' size is the increased responsibilities (e.g. risk management) for members of audit committees in the financial sector post- crisis.

Table 3.12 (see page 100) addresses the possible effect of post-crisis's regulations on board's diversity. As far as board's independence is concerned, there is a statistically significant increase in the average percentage of independent directors on the boards of both non-financial and financial firms over post-crisis period. Indeed, BOFIs' board witnessed a considerable increase in the average percentage of independent directors from 48% to 61%. In addition, the data shows that in the wake of the crisis those boards also utilise a higher presence of INEDs on audit committee. In contrast, the audit committees of non-financial firms exhibit less independence following the financial crisis. Again, the media exposure and regulatory pressure on BOFIs may have sharpen their commitment to best practices in the governance guidelines.

Table 3.11
Board size and its Committees Pre- and Post- the Financial Crisis

Variables	Global Financial Crisis						Mean Differences	
	Pre-Crisis			Post- Crisis				
	N	Mean	Median	N	Mean	Median	T-Test	Wilcoxon
Panel A: UK Non-financial PLCs								
Audit Committee Size	6,328	2.94	3.00	5,873	2.80	3.00	De***	De***
Remuneration Committee Size	6,328	3.01	3.00	5,868	2.95	3.00	De**	De***
Nomination Committee Size	3,854	3.91	4.00	3,749	3.83	4.00	De**	De***
Firm Board Size	6,966	6.73	6.00	6,201	6.29	6.00	De***	De***
Panel B: UK Public Listed BOFIs								
Audit Committee Size	1,178	3.50	3.00	1,578	3.53	4.00	In	In
Remuneration Committee Size	934	3.36	3.00	1,100	3.39	3.00	In	In
Nomination Committee Size	813	4.44	4.00	1,180	4.41	4.00	De	De
Firm Board Size	1,306	7.18	6.00	1,654	5.99	5.00	De***	De***

† De:the mean decreased in the wake of the global financial crisis. In:the mean increased in the wake of the global financial crisis.
‡ Level of significance for mean differences are ***:0.01, **:0.05, *:0.1.

Unsurprisingly, the percentage of directors with past financial experience raised considerably for both non-financial and financial firms after the crisis. Finally, responding to calls for increased diversity on the boardroom, the percentage of female directors on firms' boards has almost doubled over the post-crisis years, especially in BOFIs'. Similarly, 17% of directors on non-financial firms are non-British compared to only 12% for the pre-crisis period. However, the percentage of non-British directors on BOFIs' board increased by only 1%.

Taken together, these results suggest that, in the wake of the crisis, the boards of all UK listed firms (i.e. non-financial and financial) seem to be more diverse, as can be seen in Table 3.13 (see page 101). However, this change was only significant for BSD and BDD mean scores of boards in the non-financial sector. In contrast, the financial crisis appears to have a significant effect only on BCD's mean score of BOFIs' boards.

Table 3.12
Board's Diversity Pre- and Post- the Financial Crisis

Variables	**Global Financial Crisis**				**Mean Differences**	
	Pre-Crisis		**Post- Crisis**			
	N	Mean	N	Mean	T-Test	Wilcoxon
Panel A: UK Non-financial PLCs						
Percentage of INEDs on Audit Committee	6,395	70.91%	5,939	65.73%	De***	De***
Percentage of INEDs on Remuneration Committee	6,395	70.67%	5,939	63.76%	De***	De***
Percentage of INEDs on Nomination Committee	6,395	41.59%	5,939	42.88%	In*	In**
Percentage of INEDs on firm's board	6,966	33.30%	6,201	34.70%	In***	In***
Percentage of directors holding two or more educational qualifications	6,894	45.80%	5,798	48.71%	In***	In***
Percentage of directors with past financial experience	6,966	4.95%	6,201	7.02%	In***	In***
Average number of years a director spends on the firm board	6,902	4.92	5,835	5.52	In***	In***
Average age of directors	6,902	52.79	5,835	55.26	In***	In***
Percentage of female directors	6,902	4.51%	5,835	7.37%	In***	In***
Percentage of non-British directors	6,884	12.09%	5,830	16.79%	In***	In***
Panel B: UK Public Listed BOFIs						
Percentage of INEDs on Audit Committee	1,205	77.29%	1,592	80.89%	In**	In***
Percentage of INEDs on Remuneration Committee	1,205	55.58%	1,592	49.68%	De***	De***
Percentage of INEDs on Nomination Committee	1,205	51.29%	1,592	61.97%	In***	In***
Percentage of INEDs on firm's board	1,306	48.41%	1,654	60.55%	In***	In***
Percentage of directors holding two or more educational qualifications	1,301	44.52%	1,592	44.34%	-	-
Percentage of directors with past financial experience	1,306	4.68%	1,654	7.40%	In***	In***
Average number of years a director spends on the firm board	1,301	5.37	1,604	6.54	In***	In***
Average age of directors	1,301	54.44	1,604	57.77	In***	In***
Percentage of female directors	1,301	5.57%	1,604	10.24%	In***	In***
Percentage of non-British directors	1,300	10.50%	1,604	11.23%	-	-

† De:the mean decreased in the wake of the global financial crisis. In:the mean increased in the wake of the global financial crisis.
‡ Level of significance for mean differences are ***:0.01, **:0.05, *:0.1.

Table 3.13
Board's Diversity Indices Pre- and Post- Crisis

Variables	**Global Financial Crisis**				**Mean Differences**	
	Pre-Crisis		**Post- Crisis**			
	N	Mean	N	Mean	T-Test	Wilcoxon
Panel A: UK Non-financial PLCs						
Statutory Diversity	6,966	2.15	6,201	2.26	In***	In***
Competitive Diversity	6,883	5.25	5,803	5.32	-	-
Demographic Diversity	6,882	3.28	5,823	3.67	In***	In***
Panel B: UK Public Listed BOFIs						
Statutory Diversity	1,306	1.86	1,654	1.82	-	-
Competitive Diversity	1,293	5.35	1,601	5.71	In***	In***
Demographic Diversity	1,300	3.17	1,603	3.27	-	-

† De:the mean decreased in the wake of the global financial crisis. In:the mean increased in the wake of the global financial crisis.
‡ Level of significance for mean differences are ***:0.01, **:0.05, *:0.1.

3.6.2.4 Changes in Board Competitive Capital

This section will cover the first research question (RQ2a) for the second research objective (see introduction of this chapter). Specifically, it will answer this question:

> ***Are there significant changes in the competitive capital of boards of companies listed in the UK over the last fifteen years?***

Table 3.14 presents the board capital for the UK plcs over 15 years regarding the board governance experience, educational qualifications, and their social network, while Figure 3.4 depicts the progress of these boards' competitive capital between 2000-14. On average, a UK plc's director has a working experience on three different quoted firms' boards. In unreported tests, it is found that this average number increases to ten board seats per director when all types of firms a director worked for (i.e. private and quoted) are considered. Also, it is found that those boards who exhibit high leadership duality seem to have less than average governance experience per director. This could be attributed to the association between the board's adoption of governance best practices and the governance

experience of its board members. Another possible explanation is that firms with CEO role duality are usually small firms which have small size boards and less experienced directors.

Table 3.14
Boards Capital of the UK PLC over 1999-2014

Variables	**Statistics**					
	N	Mean	Median	Std. Dev.	Min	Max
The Board's Governance Experience on Quoted Firms (Number of board seats)	17,744	19.53	17.00	13.97	4.00	46.0
The Average Governance Experience on Quoted Firms Per Director (Number of board seats)	17,098	3.09	2.75	1.69	1.17	6.0
The Board's Number of Educational Qualification (Number of qualifications)	17,744	9.85	8.00	7.04	1.00	23.0
The Average Number of Educational Qualification Per Director (Number of qualifications)	17,098	1.50	1.50	0.65	0.50	2.6
The Board Network (Number of connection with other directors)	17,744	3170.51	2172.00	3669.51	164.00	9606.0
The Average Network Per Director (Number of connection with other directors)	17,744	435.94	352.56	353.29	37.00	1121.2

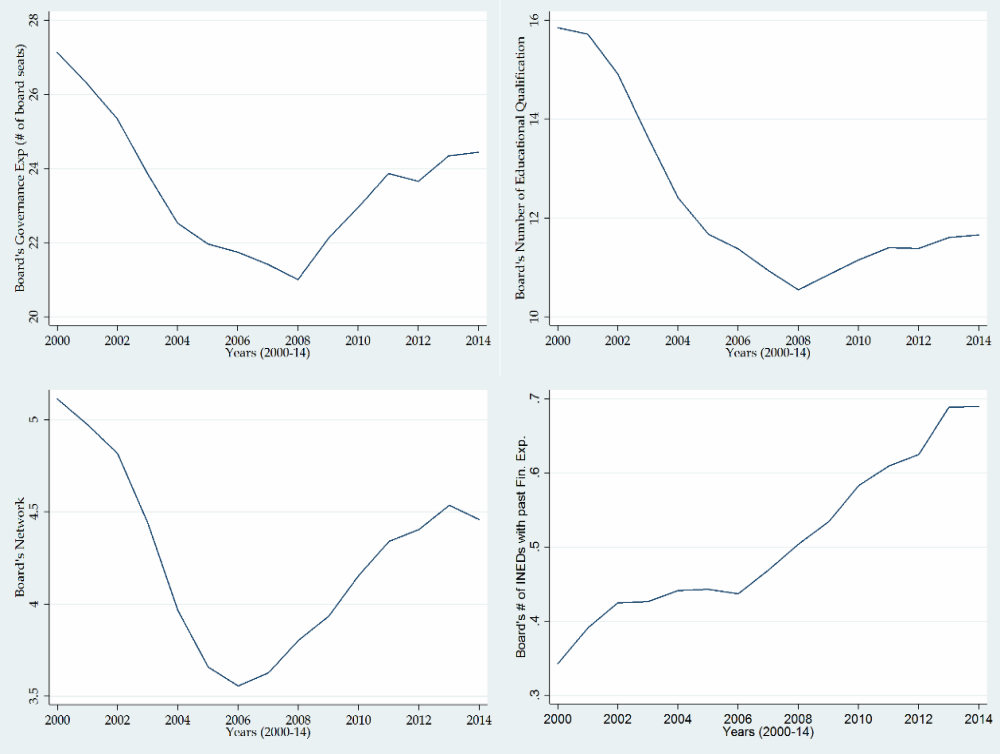

Figure 3.4: Boards' Capital of UK PLC Over 1999-2014

Secondly, a typical director in UK plc has, on average, 1.5 professional and academic qualifications. Again, it is found the average number of professional and academic qualifications to be significantly and negatively correlated to firms that show high level of board's leadership duality. This could be attributed to the firm size whereby small firms may face difficulty in attracting highly educated directors. Lastly, director in the UK plc, on average, appears to be connected to 436 other directors. However, the considerable difference between the average network per director (435.94) and the median network per director (352.56) indicates that directors in some firms tend to be more connected than others. Similar to other board capital dimensions, the average network per director was found to be significantly and negatively correlated to board's leadership role duality, which again may be attributed to firm size (i.e. well-connected directors tend to end up in large firms).

3.6.2.5 Competitive Capital Across FTSE Indices

This section will cover the second research question (RQ2b) related to the second research objective (see introduction of this chapter). Specifically, it will answer this question:

> ***Are there significant differences in the boards' competitive capital across various FTSE Indices?***

In Table 3.15, the aim is to explore how these board competitive capital differ due to the firms' size and indices. Indeed, panel (A) shows that the most experienced directors in the market works on FTSE100 firms with the other firms' boards seeming to have less governance experience as they decrease in size. Similarly, in panel (B), FTSE100 boards' collective number of educational qualifications is almost double compared to firms in the other FTSEs' indices. For instance, the average director on FTSE100 firms has at least two educational qualifications, while it is 1.28 for an average director on FTSE FLEDGLING firms. This again suggests that larger companies tend to have more 'qualified' directors than SMEs as it may require managerial talent to lead their large operations.

Table 3.15
Board's Competitive Capital Across the FTSE UK Index Series Over 1999-14

FTSE UK Index Series	Variables	N	Mean	Median	Std. Dev.	p5	p95
	Panel A: Governance Experience on Quoted firms						
FTSE100	Total board Governance Experience	1,089	43.71	42.00	17.20	20.00	74.00
	Average board Governance Experience (per director)		3.97	3.87	1.12	2.30	6.08
FTSE250	Total board Governance Experience	2,185	28.18	27.00	12.04	12.00	49.00
	Average board Governance Experience (per director)		3.49	3.33	1.30	1.63	5.80
FTSE SMALL CAP	Total board Governance Experience	2,256	21.83	21.00	9.68	7.00	38.00
	Average board Governance Experience (per director)		3.44	3.14	1.52	1.30	6.25
FTSE FLEDGLING	Total board Governance Experience	629	18.38	16.00	11.52	5.00	38.00
	Average board Governance Experience (per director)		3.49	2.75	2.51	1.00	8.67
FTSE ALL SHARES	Total board Governance Experience	5,834	14.94	13.00	8.91	5.00	32.00
	Average board Governance Experience (per director)		2.85	2.40	1.79	1.00	6.00
	Panel B: Educational Qualifications (Academic and Professional)						
FTSE100	Total board's number of Educ.qualifications	1,089	22.98	22.00	8.89	10.00	41.00
	Average board's educ. qualifications (per director)		2.07	2.09	0.50	1.20	2.87
FTSE250	Total board's number of Educ.qualifications	2,185	13.92	13.00	5.97	5.00	24.00
	Average board's educ. qualifications (per director)		1.69	1.67	0.56	0.83	2.64
FTSE SMALL CAP	Total board's number of Educ.qualifications	2,256	9.80	9.00	4.50	3.00	18.00
	Average board's educ. qualifications (per director)		1.50	1.44	0.56	0.60	2.50
FTSE FLEDGLING	Total board's number of Educ.qualifications	629	8.11	7.00	5.54	1.00	18.00
	Average board's educ. qualifications (per director)		1.34	1.33	0.69	0.33	2.57
FTSE ALL SHARES	Total board's number of Educ.qualifications	5,834	7.65	7.00	4.28	2.00	16.00
	Average board's educ. qualifications (per director)		1.40	1.33	0.65	0.50	2.50
	Panel C: Social Network						
FTSE100	Total board social network	1,089	10.69	9.63	6.36	2.50	22.37
	Average board social network (per director)		0.94	0.91	0.42	0.29	1.63
FTSE250	Total board social network	2,185	4.68	4.20	2.92	0.91	10.08
	Average board social network (per director)		0.56	0.51	0.33	0.14	1.17
FTSE SMALL CAP	Total board social network	2,256	3.07	2.55	2.19	0.52	7.41
	Average board social network (per director)		0.46	0.41	0.31	0.09	1.07
FTSE FLEDGLING	Total board social network	629	2.36	1.88	2.11	0.14	6.54
	Average board social network (per director)		0.40	0.36	0.32	0.03	1.02
FTSE ALL SHARES	Total board social network	5,834	1.94	1.47	1.65	0.14	5.09
	Average board social network (per director)		0.35	0.28	0.29	0.03	0.90

Therefore, directors appear to be less 'qualified' as firms get smaller. Finally, panel (C) indicates that the FTSE100 firms are significantly more connected, and their directors have larger networks. This is consistent with the literature that found UK directors on large firms are better connected than the average directors in terms of direct links (Renneboog and Zhao, 2011).

Table 3.16 tests the statistical significance of the difference between different groups of firms' boards as categorised by FTSE Index Series. Panel (A) indeed indicates that the difference among these groups regarding board's governance cumulative experience is statistically significant at 1% level, suggesting that top firms' boards are more experienced. Similarly, with respect to boards' collective number of educational qualifications and network size, both panels (B) and (C) also reveal that there is significant difference among the boards of FTSE Index Series. The final panel (D) combines firms of FTSE100 with firms of FTSE250 (i.e. FTSE350) and compare to another group of firms composed of FTSE SMALL and FLEDLING. Results show that all board's competitive capital criteria are significantly less in the latter group of firms. In summary, these results suggest that the FTSE UK Index Series are significantly associated with the board's level of competitive capital which gradually decreases as firms get smaller. This reflects the association between firm size and complexity on the one hand, and the board's requirement of competitive capital on the other hand. In addition, considering the competition for highly talented directors on labour markets, it could also reflect top firms' ability to attract such talents.

Table 3.16
Comparisons of Group Means for Boards' Competitive Capital by the FTSE UK Index Series

Panel A: Board's Governance Experience				
Scheffe multiple group comparisons: row mean − column mean (p value)				
	FTSE 100	FTSE 250	FTSE SMALL	FTSE FLEDG
FTSE250	-15.53 0.000***			
FTSE SMALL	-21.88 0.000***	-6.35 0.000***		
FTSE FLEDGLING	-25.33 0.000***	-9.80 0.000***	-3.45 0.000***	
FTSE ALL SHARES	-28.77 0.000***	-13.24 0.000***	-6.89 0.000***	-3.44 0.000***
One-way ANOVA		df	F	Prob >F
Source Between Groups		4	1915.11	0.0000
Panel B: Board's Educational Qualifications				
Scheffe multiple group comparisons: row mean − column mean (p value)				
	FTSE 100	FTSE 250	FTSE SMALL	FTSE FLEDG
FTSE250	-9.06 0.000***			
FTSE SMALL	-13.18 0.000***	-4.12 0.000***		
FTSE FLEDGLING	-14.87 0.000***	-5.81 0.000***	-1.70 0.000***	
FTSE ALL SHARES	-15.33 0.000***	-6.27 0.000***	-2.15 0.000***	-0.45 0.387
One-way ANOVA		df	F	Prob >F
Source Between Groups		4	2205.21	0.0000
Panel C: Board's Social Network				
Scheffe multiple group comparisons: row mean − column mean (p value)				
	FTSE 100	FTSE 250	FTSE SMALL	FTSE FLEDG
FTSE250	-6.00 0.000***			
FTSE SMALL	-7.61 0.000***	-1.61 0.000***		
FTSE FLEDGLING	-8.32 0.000***	-2.32 0.000***	-0.71 0.000***	
FTSE ALL SHARES	-8.74 0.000***	-2.74 0.000***	-1.13 0.000***	-0.42 0.010**
One-way ANOVA		df	F	Prob >F
Source Between Groups		4	2424.62	0.0000
Panel D: T-test for the difference between FTSE350 and FTSE SMALL & FLEG				
	FTSE 350		FTSE SMALL & FLED		T-Test
	N	Mean	N	Mean	Sig.
Board's Governance Experience	3,274	33.34	2,885	21.08	***
Board's Educational Qualifications	3,274	16.93	2,885	9.43	***
Board's Social Network	3,274	6.68	2,885	2.92	***

Level of significance for mean differences are ***:0.01, **:0.05, *:0.1.

3.6.2.6 Board Competitive Capital Before and After the Financial Crisis

This section will cover the third research question (RQ2c) for the second research objective (see introduction of this chapter). Specifically, it will answer this question:

Are there significant changes in the board competitive capital before and after the financial crisis?

Table 3.17 investigates if the UK plcs' boards have witnessed change regarding board competitive capital over the pre-crisis period. The increasing responsibilities, the serious legal consequences and the media pressure on directors after the financial crisis may have led to highly qualified individuals to withdraw from the market. Hence, that may have led to an overall decrease of boards' competitive capital in the market. However, the increased level of required skills and knowledge in the post-crisis corporate governance codes might have pushed firms to attract more qualified directors or train their existing directors. In that case, the overall board capital of the UK listed firms would gradually increase over the post-crisis period.

Indeed, Table 3.17 shows that firms' board competitive capital significantly increased after the financial crisis. Both non-financial listed firms and BOFIs have witnessed an increase in their board capital (see, panel A and B, respectively), with boards of the latter having considerably more qualified boards than the average firms in the entire UK market. In term of how significant the effect of financial crisis is, the increase in board's competitive capital across the entire market is statistically significant. However, one exception is the BOFIs' boards that witnessed an increase in the boards' average number of educational qualifications, yet that increase is not statistically significant.

Noteworthy, panel (B) suggests that post-crisis, while the average competencies per director have increased, the aggregate board capital have decreased. This mirrors the decline in the BOFIs' boards' size which may suggest a withdrawal of less qualified directors rather than qualified ones as a way of complying with the new governance codes.

Table 3.17
Board Capital Across the UK Listed Firms Over Pre- and Post- the Financial Crisis

	Variables	**Global Financial Crisis**				**Mean Differences**	
		Pre-Crisis		**Post- Crisis**			
		N	Mean	N	Mean	T-Test	Wilcoxon
	Panel A: UK Non-financial PLC						
Experience	Total Board Governance Experience	6,966	18.33	6,201	19.28		
	Average Board Governance Experience (per director)	6,902	2.68	5,835	3.18	In***	In***
Educ.	Total board's number of Educ. qualifications	6,966	10.36	6,201	9.51		
	The average board's Educ. Qualifications (per director)	6,902	1.49	5,835	1.54	In***	In***
Network	Total board social network	6,966	2938.39	6,201	3262.53		
	Average board social network (per director)	6,966	390.28	6,201	468.61	In***	In***
	Panel B: UK Public Listed BOFIs						
Experience	Total Board Governance Experience	1,306	25.31	1,654	22.71		
	Average Board Governance Experience (per director)	1,301	3.62	1,604	4.03	In***	In***
Educ.	Total board's number of Educ. qualifications	1,306	11.36	1,654	9.00		
	The average board's Educ. Qualifications (per director)	1,301	1.45	1,604	1.46	In	In
Network	Total board social network	1,306	3859.70	1,654	3542.93		
	Average board social network (per director)	1,306	448.38	1,654	516.86	In***	In***

† De:the mean decreased in the wake of the global financial crisis. In:the mean increased in the wake of the global financial crisis.

‡ Level of significance for mean differences are ***:0.01, **:0.05, *:0.1.

3.6.2.7 Changes in Board Busyness

This section covers the first research question (RQ3a) for the third research objective (see introduction of this chapter). Specifically, it will answer this question:

Are there significant changes in the level of boards' busyness of companies listed in the UK over the last fifteen years?

As discussed earlier, consistent with previous studies on directors' busyness, a director is considered busy if s(he) simultaneously serves on three or more boards. Besides, this cut-off reflects the limitation on the executives' number of directorships imposed by the UK Combined Code (FRC, 2008).

Table 3.18 explores the issue of director's multiple directorships and workloads. The unit of analysis in panel (A) is directors whereas panel (B) reports the incidence of board's busyness in all UK listed firms (i.e. board level). As can be seen in panel (A), the average director holds 1.5 board seats with a median of only one board seat in quoted firms. However, when the workload of directorships is taken into consideration, the average number of board seats increases to 2.3 seats.[52] Consequently, roughly 13% and 37% of directors sitting on the UK listed firms are considered busy based on the number of board seats and directorships' workload, respectively. Since the UK Combined Code (FRC, 2008) restricts the number of board seats for executives only, the sample is further broken into NEDs and EDs. Indeed, in compliance with the UK best practices, only 3.4 % of the EDs sample (i.e. 45,072 ED-years) have three or more directorships in listed boards, compared to 21.3% for NEDs.

[52]The workload of directorships is operationalised by counting chairmanship equal to three directorships and a deputy chairmanship equal to two directorships.

Table 3.18
Busyness of Directors and Boards of the UK PLCs Over 1999-2014

Variables	N	Mean	Median	Std. Dev.
Panel A: Busyness at Directors' Level				
Average number of board seats per director	96,175	1.54	1.00	1.12
Average number of directorships' workload	96,175	2.36	1.00	1.74
Percentage of busy directors (based on number of board seats)	96,175	12.92%	0.00%	33.54%
Percentage of busy directors (based on directorships' workload)	96,175	37.21%	0.00%	48.34%
Percentage of busy NEDs	51,103	21.29%	0.00%	40.94%
Percentage of busy EDs	45,072	3.43%	0.00%	18.19%
Panel B: Busyness at Boards' Level				
Average number of board seats per director on Firm Board	17,098	1.79	1.67	0.73
Average number of board seats per NED on Firm Board	12,297	2.24	2.00	1.00
Board Busyness 1 (based on the average number of board seats per director)	17,098	7.06%	0.00%	25.62%
Board Busyness 2 (based on the average number of board seats per NED)	16,933	18.47%	0.00%	38.80%
Board Busyness 3 (based on the percentage of busy directors)	17,098	9.34%	0.00%	29.10%
Board Busyness 4 (based on the percentage of busy NEDs)	16,933	28.18%	0.00%	44.99%
Board Busyness 5 (based on the directors' directorships' workload)	17,098	40.43%	0.00%	49.08%

Panel (B) indicates that the incidence of board's busyness among UK listed firms range from as low as 7% to as high as 40% based on the measurements used. As mentioned earlier, two groups of measurements that are frequently used in the literature are deployed; the first is based on the average number of board seats a board holds, and the second is based on the percentage of busy directors sitting on a board (see Appendix C for an illustrative example). Each group of busyness measurements has two sub-measurements; one assumes that all directors, both EDs and NEDs, are equally responsible, and the second focuses on NEDs only and hold them ultimately responsible for board's effectiveness. Therefore, while the first measures board's busyness based on the number of board seats that both EDs and NEDs hold, the second measures board's busyness based on NEDs' number of board seats. The table presents the extent of board's busyness which varies significantly according to the measurement used, which may explain the inconsistency among the findings of studies reporting on board's busyness.

Overall, regardless of the measurements used, the incidence of board's busyness among UK listed firms seems to be decreasing over the last fifteen years (see Figure 3.5). This decreasing trend may reflect the regulatory pressure and shareholders' campaigns to limit the occurrence of overburdened boards.

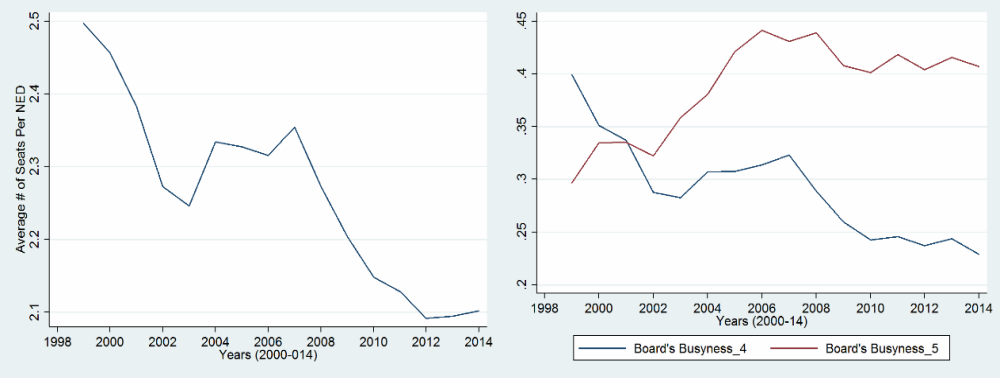

Figure 3.5: Board's Busyness of UK Listed Firms Between (2000-2014)

3.6.2.8 Board Busyness Across FTSE Indices

This section addresses the second research question (RQ3b) related to the third research objective (see introduction of this chapter). Specifically, it will answer this question:

Are there significant differences in the level of boards' busyness across various FTSE Indices?

Table 3.19 explores the extent of board's busyness of firms listed in the UK FTSE Index Series. Consistent with Ferris et al., (2003), who find multiple directorships are more frequent in big firms, the data suggests that the percentage of busy boards increase parallel to firms' size. Specifically, FTSE100 firms has the highest average number of board seats per NED (2.5) among the FTSE UK Index Series, followed by FTSE250 firms with an average of 2.4 board seats. In addition, FTSE100 exhibits the highest level of board busyness (39%) compared to FTSE250, which comes in the second place with an average of 33%. FTSE FLEDGLING firms show the lowest level of board's busyness (20%).

Table 3.19
Board's Busyness Across the FTSE UK Index Series Over 1999-14

	Variables	N	Mean	Median	Std. Dev.	p5	p95
FTSE 100	Average # of board seats per NED on Firm Board	800	2.51	2.43	0.63	1.67	3.70
	Board Busyness 3 (based on the percentage of busy directors)	1,089	12.40%	0.00%	32.97%	0.00%	100.0%
	Board Busyness 4 (based on the percentage of busy NEDs)	1,089	38.93%	0.00%	48.78%	0.00%	100.0%
FTSE 250	Average # of board seats per NED on Firm Board	1,768	2.40	2.25	0.81	1.33	4.00
	Board Busyness 3 (based on the percentage of busy directors)	2,185	11.17%	0.00%	31.50%	0.00%	100.0%
	Board Busyness 4 (based on the percentage of busy NEDs)	2,185	33.18%	0.00%	47.10%	0.00%	100.0%
FTSE SMALL	Average # of board seats per NED on Firm Board	1,759	2.38	2.25	0.79	1.25	3.80
	Board Busyness 3 (based on the percentage of busy directors)	2,256	16.36%	0.00%	37.00%	0.00%	100.0%
	Board Busyness 4 (based on the percentage of busy NEDs)	2,243	32.14%	0.00%	46.71%	0.00%	100.0%
FTSE FLEDGLING	Average # of board seats per NED on Firm Board	437	2.34	2.00	1.37	1.00	5.25
	Board Busyness 3 (based on the percentage of busy directors)	629	14.15%	0.00%	34.88%	0.00%	100.0%
	Board Busyness 4 (based on the percentage of busy NEDs)	620	20.00%	0.00%	40.03%	0.00%	100.0%
FTSE ALL SHARE	Average # of board seats per NED on Firm Board	4,017	2.07	1.88	1.07	1.00	4.00
	Board Busyness 3 (based on the percentage of busy directors)	5,834	6.77%	0.00%	25.13%	0.00%	100.0%
	Board Busyness 4 (based on the percentage of busy NEDs)	5,759	25.13%	0.00%	43.38%	0.00%	100.0%

One possible explanation for the above observations discussed in the literature is the "selection effects" of holding multiple board seats (Adams, Hermalin, and Weisbach, 2010) . This concept suggests that the most reputable or qualified NEDs are more likely to hold more board seats, and eventually are classified as busy directors. Since large firms attract the most qualified directors on the market, they tend to have busier boards. Furthermore, NEDs who work on FTSE100 firms might be perceived as 'good' directors in the market, hence attract even more directorships compared to their counterparts, which explains the high percentage of board busyness among FTSE100 firms. Interestingly, when board busyness based on the third measurement is used, FTSE100 and FTSE250 boards show a lower

level of busyness than FTSE SMALL's and FLEDGLING's. Due to regulators' restrictions on the number of seats an executive on FTSE350 can hold, the total board's level of busyness decreases if executives' busyness is included in the calculation of board's busyness. Overall, the difference between the level of board's busyness among UK FTSE Index Series is statistically significant (see Table 3.20 on page 114).

3.6.2.9 Board Busyness Before and After the Financial Crisis

This section will cover the third research question (RQ3c) for the third research objective (see introduction of this chapter). Specifically, it will answer this question:

Are there significant differences in the level of boards' busyness before and after the financial crisis?

We further investigate the effect of the financial crisis and its accompanying corporate governance reforms on the busyness of UK listed firms' boards in Table 3.21 (see page 115). Indeed, it is found that post-crisis years witnessed a significant decrease in the percentage of busy boards among UK listed firms, reflecting the increasing demand for directors to devote more time to their boards (Walker, 2009). Figure 3.6 further provides evidence of the trend.

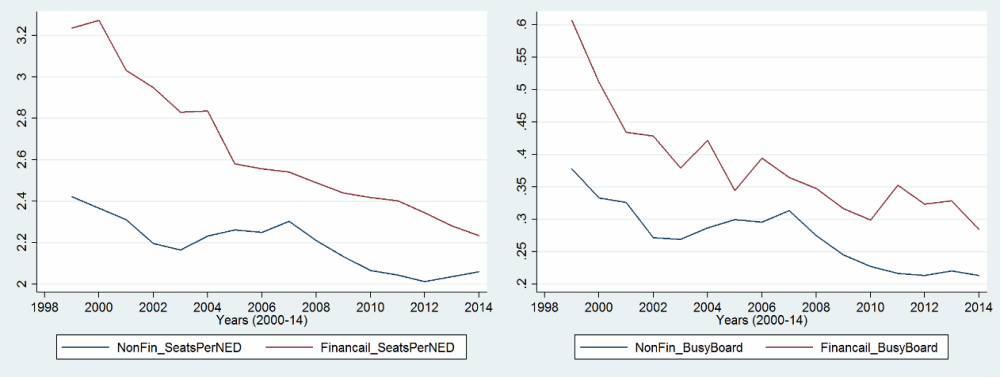

Figure 3.6: Average Directorships Per NEDs & Board Busyness Across UK Public Listed BOFIs & Non-Financial Firms (2000-2014)

Table 3.20
Comparisons of Group Means for Boards' Busyness by the FTSE UK Index Series

Panel A: Average # of board seats per NED on Firm Board				
Scheffe multiple group comparisons: row mean – column mean (p value)				
	FTSE 100	FTSE 250	FTSE SMALL	FTSE FLEDG
FTSE	-0.113			
250	0.099*			
FTSE	-0.134	-0.020		
SMALL	0.029**	0.983		
FTSE	-0.170	-0.056	-0.036	
FLEDG	0.062*	0.875	0.973	
FTSE	-0.443	-0.330	-0.310	-0.274
ALL SHARS	0.000***	0.000***	0.000***	0.000***
One-way ANOVA		df	F	Prob >F
Source Between Groups		4	71.23	0.000***
Panel B: Board Busyness 3 (based on the percentage of busy directors)				
Scheffe multiple group comparisons: row mean – column mean (p value)				
	FTSE 100	FTSE 250	FTSE SMALL	FTSE FLEDG
FTSE	-0.012			
250	0.876			
FTSE	0.040	0.052		
SMALL	0.013**	0.000***		
FTSE	0.018	0.030	-0.022	
FLEDG	0.853	0.310	0.620	
FTSE	-0.056	-0.044	-0.096	-0.074
ALL SHARS	0.000***	0.000***	0.000***	0.000***
One-way ANOVA		df	F	Prob >F
Source Between Groups		4	47.13	0.000***
Panel C: Board Busyness 4 (based on the percentage of busy NEDs)				
Scheffe multiple group comparisons: row mean – column mean (p value)				
	FTSE 100	FTSE 250	FTSE SMALL	FTSE FLEDG
FTSE	-0.058			
250	0.019**			
FTSE	-0.068	-0.010		
SMALL	0.002***	0.965		
FTSE	-0.189	-0.132	-0.121	
FLEDG	0.000***	0.000***	0.000***	
FTSE	-0.138	-0.081	-0.070	0.051
ALL SHARS	0.000***	0.000***	0.000***	0.124
One-way ANOVA		df	F	Prob >F
Source Between Groups		4	37.47	0.000***

Panel D: T-test for the difference between FTSE350 and FTSE SMALL & FLEG					
	FTSE 350		FTSE SMALL & FLED		T-Test
	N	Mean	N	Mean	Sig.
Average # of board seats per NED on Firm Board	2,568	2.43	2,196	2.37	***
Board Busyness 3 (based on the percentage of busy directors)	3,274	11.58%	2,885	15.88%	***
Board Busyness 4 (based on the percentage of busy NEDs)	3,274	35.09%	2,863	29.51%	***

Level of significance for mean differences are ***:0.01, **:0.05, *:0.1.

In addition, according to bank control theory, directors employed in the financial sectors might be actively sought in the labour market, compared to other

sectors. Indeed, Table 3.21 shows that financial firms' boards are busier than non-financial firms' board, and their NEDs hold on average more directorships. This position seems to hold even after the global financial crisis with financial firms' NEDs holding on average 2.4 board seats compared to 2.1 for non-financial firms' NEDs.

Table 3.21
Board's Busyness Across the UK Listed Firms Over Pre- and Post- the Financial Crisis

Variables	**Global Financial Crisis**				**Mean Differences**	
	Pre-Crisis		**Post- Crisis**			
	N	Mean	N	Mean	T-Test	Wilcoxon
Panel A: UK Non-financial PLCs						
Average number of board seats per NED on Firm Board	4,612	2.26	4,281	2.06	De***	De***
Board Busyness 3 (based on the percentage of busy directors)	6,902	0.07	5,835	0.06	De**	De**
Board Busyness 4 (based on the percentage of busy NEDs)	6,847	0.30	5,774	0.22	De***	De***
Panel B: UK Public Listed BOFIs						
Average number of board seats per NED on Firm Board	987	2.67	1,339	2.35	De***	De***
Board Busyness 3 (based on the percentage of busy directors)	1,301	0.22	1,604	0.23	-	-
Board Busyness 4 (based on the percentage of busy NEDs)	1,284	0.39	1,585	0.32	De***	De***

† De:the mean decreased in the wake of the global financial crisis. In:the mean increased in the wake of the global financial crisis.
‡ Level of significance for mean differences are ***:0.01, **:0.05, *:0.1.

Taken together, these results suggest that the boards of the largest UK plcs (i.e. FTSE100) in the UK are busier than the relatively smaller ones. Also, the average number of board seats per NEDs is also significantly higher in those large firms. This seems to be consistent with resource-based theories that suggest directors who are in possession of unique experience and a wide network will be actively sought in the labour market.

Secondly, NEDs at BOFIs hold significantly more directorships compared to their counterparts in non-financial plcs. Bank control theory suggests financial firms, due to their control of external funding, arguably have "the upper hand" over the other market sectors. Consequently, directors in these financial firms are

more likely to hold multiple directorships either to represent their banks on other firms' board or to facilitate access to external funding (Kaczmarek et al., 2014). Furthermore, the importance of directors' financial background and experience are increasingly emphasised on corporate governance codes which make financial firms' directors to be much more attractive. Finally, the percentage of firms with busy boards are decreasing over the years especially after the financial crisis, which is understandable in the light of the increasing pressure on directors to be more committed to their boards (Walker, 2009).

3.6.3 Board's Diversity, Competitive Capital and Busyness, and Firms' Performance

The fourth objective of this study was to observe if there is any relationship between the board's characteristics of interest, i.e. board's diversity, competitive capital and busyness, and firm performance. Specifically, it seeks to answer the following research question (RQ4):

> ***Are there significant relationships between boards' characteristics (i.e. diversity, competitive capital, and busyness) and market-based financial performance of companies listed in the UK?***

Two measures of financial performance are used here; average market adjusted stock return and average return on equity (ROE), covering both market and accounting performance from an investor's perspective.

Table 3.22 presents the correlation between the boards' characteristics and firm performance. At a simple correlation level of analysis, there is a significant positive relationship between the various diversity indices based on both measures of firm performance. Similarly, board's competitive capital is correlated to firm performance measures and is significant at the 1% level. Consistent with some studies in directors' diversity literature (Anderson et al., 2011; Erhardt et al., 2003), this suggests that firms with better performance, as measured by ROE and stock return, on average have more diversified and competitive boards.

Overall, the analysis shows no significant relation between board's busyness and firm performance, consistent with other studies (see, Kiel and Nicholson, 2003). However, only when using a measure of board's busyness that take the workload of directorships into consideration, there is a negative and significant relationship between board's busyness and market-based measure of firm performance. Finally, consistent with Kiel and Nicholson (2003), the presence of CEO duality is significantly and negatively correlated with firm performance. Not surprisingly, there are significant positive correlations between firm's size and board size, and its financial performance.

Table 3.22
Board's Characteristics of Interest and Performance – Correlation Matrix

	Antecedents to board's task performances	**Average ROE**		**Average Market Adj Stock Return**	
		Obs.	**Sig.**	**Obs.**	**Sig.**
Diversity Indices	Statutory Diversity	14,309	0.0293***	14,839	0.0235***
			0.0005		0.0042
	Competitive Diversity	14,296	0.0291***	14,856	0.0390***
			0.0005		0.0000
	Demographic Diversity	14,490	0.0457***	15,106	0.0791***
			0.0000		0.0000
Competitive Capital	Board's Governance Experience	14,490	0.0548***	15,106	0.1305***
			0.0000		0.0000
	Board's Educational Qualifications	14,490	0.0487***	15,106	0.1359***
			0.0000		0.0000
	Board's Social Network	14,490	0.0517***	15,106	0.1030***
			0.0000		0.0000
Busyness & Workload	Board Busyness (percentage of busy directors)	14,330	0.0014	14,866	0.0084
			0.8626		0.3062
	Board Busyness (percentage of busy NEDs)	14,214	0.0092	14,725	0.0014
			0.2715		0.8648
	Board Workload	14,330	0.0009	14,866	-0.0528***
			0.9097		0.0000
Others	Firm Size	14,408	0.1302***	14,776	0.2435***
			0.0000		0.0000
	Board Size	14,490	0.0722***	15,106	0.1837***
			0.0000		0.0000
	Duality	14,490	-0.0179**	15,106	-0.0298***
			0.0309		0.0002

‡ Level of significance for correlations are ***:0.01, **:0.05, *:0.1.

3.7. Chapter Summary

The board of directors is considered to be the most important internal governance mechanism on the modern corporate governance practices. It plays an important role in controlling 'opportunistic' management, providing counsel and advice, and eventually protecting shareholders' interests. However, the poor performance of board of directors during the global financial crisis (2007-08) pointed the attention of both regulators and scholars toward board's 'fixable' deficits. Among the most significant directors' deficits are those relating to boards' homogeneity, insufficient experience, and lack of commitment and incentives. While board diversity has been researched extensively over the last two decades, most empirical studies focus on only one dimension of board diversity, namely, statutory diversity or independence. In light of the inconclusive results of board's statutory diversity on outcomes, there is a need to systematically explore different layers of diversity such as competitive and demographic diversity. In addition, the generalisability of findings of previous studies is questionable as most of these studies used US data, were conducted pre-millennium, and/or were cross-sectional data.

This study contributes to boards literature by exploring three main antecedents of board task performance, namely, board diversity (including statutory, competitive, and demographic diversity), board's competitive capital, and board's time commitment. Specifically, this study reports on the extent of diversity, competitive capital, and busyness of the board of the UK public listed firms, over a period of fifteen years (1999-2014). In the wake of the global financial crisis, the UK market witnessed the launch of several governance codes that would potentially change the UK listed firms' board composition and commitment. There are increasing calls to evaluate the corporate governance of UK firms in the post-crisis period as far as board composition, competitive capital, and busyness are concerned. This study responds to such calls by providing a timely review of the extent to which regulators' endeavours in addressing board diversity, competitive capital, and busyness in the UK context.

With respect to board diversity, results show that statutory diversity (SD) is the most common diversity attribute among UK plcs' boards, while the other two diversity attributes, the competitive (CD) and the demographic (DD), were found to be significantly less common. That is, findings indicate that only 9% and 7% of firms in the sample can be classified to have high level of competitive and demographic diversity, respectively. However, the analysis shows that over the last fifteen years, firms were increasingly diversifying their boards based on other attributes, i.e. BCD and BDD. Findings also reveal that the FTSE UK Index Series had a significant association with the extent of boards' diversity. Specifically, board's of FTSE100 & FTSE250 being the most diverse, while boards low-capitalised firms, i.e. FTSE SMALLCAP & FTSE Fledgling, are associated with lower level of board's diversity. In addition, post-crisis regulations seem to have some impact on the level of board diversity in all UK listed firms' (i.e. non-financial and financial). Interestingly, while diversity level for all firms' increased after the crisis, the significance of that impact seems to differ between non-financial and financial sectors. The increase was significant for statutory and demographic attributes but not the competitive attribute in the case of the non-financial sector. In contrast, the financial crisis appears to have a significant effect only on the competitive diversity of BOFIs' boards.

Regarding board's competitive capital and busyness, FTSE100 firms was found to have the most experienced, educated, and socially connected boards, with a general trend of boards getting significantly less 'competitive' as firm size decreases. These results suggest that the FTSE UK Index Series are significantly associated with the board's level of competitive capital which seems to gradually decrease as firms get smaller and the level of complexity lessened. It was also found that the extent of board's busyness varies considerably according to the measurement used. Specifically, based on number of directorships held only by NEDs, the incidence of board's busyness ranges from 18% to 40%. However, regardless of the measurement used, the incidence of board's busyness seems to be decreasing over the last fifteen years in the UK. At the directors' level, consistent with the related literature, large firms seem to have more busy NEDs. At the board's level, when firms were grouped into two main categories based on their index (i.e. FTSE350,

and FTSE SMALL & FLED), it was found that small firms have significantly more busy boards than larger firms. In contrast, using the proxy of busyness based on NEDs only instead of all directors indicates large firms have significantly more busy boards than small firms. The findings to some extent suggest that the post-crisis attempts to limit the occurrence of board busyness were successful. It was found that post-crisis years witnessed a significant decrease in the percentage of busy boards among UK listed firms. Finally, findings show a significant positive relationship between the various diversity indices and board's competitive capital, and both market-based measures of financial performance. This suggests that firms with better performance, as measured by ROE and stock return, on average have more diversified and competitive boards. Although the analysis shows no significant relation between most measures of board's busyness and firm performance, there is a negative and significant relationship between board's workload and market-based measure of firm performance.

Chapter 4

External Market for Directors: NEDs' Board Seats

4.1. Introduction

This chapter presents the second empirical study to explore the efficiency of the UK directors' employment market in creating incentives for NEDs to behave in the market players' interests (e.g. shareholders). Specifically, the aim of this chapter is to answer one of the main research questions of this thesis - to what extent NEDs in the UK market are subjected to an external sanction system whereby NEDs are rewarded (penalised), based on their firm performance and reputational capital, through gaining (losing) an external board seat.[53] This chapter also addresses if the external employment market has been affected as incentives mechanism following changes in the UK regulatory environment after the financial crisis.

[53]NED's 'reputational capital' is a measure of director individual skills, knowledge, and qualifications. Therefore, this measure is conceptually related to the board's 'competitive capital' introduced on chapter 3 which is an aggregate measure of the reputational capital of all directors sitting on that board. On other words, this thesis uses the terms 'competitive' and 'reputational' capital to distinguish between the unit of interest. The former term is used with boards reflecting the competitive advantage that a firm achieves by having an overall competitive board, while the latter term is used with NEDs reflecting their attractiveness in the employment market.

The remainder of the chapter is structured as follows. The next section provides an overview of the chapter, highlighting its importance and objectives. Section three addresses the research questions for this part of the study. Section four presents the literature review and development of hypotheses. This is followed by the research design in section five. Finally, the findings and the chapter summary are presented in sections six and seven, respectively.

4.2. Chapter Overview

NEDs have been recognised in the various corporate governance codes in the UK as mechanisms for strengthening firm governance. It is assumed that greater representation from and independence of NEDs on boards and sub-committees will help align management and shareholders' interests and reduce management's opportunistic behaviour (Li et al., 2012; Segrestin and Hatchuel, 2011). NEDs do not only monitor the performances of top management but also the firms' risks and financial integrity through their roles in risk and audit committees and also in determining the remunerations and nominations of executive directors. In addition, NEDs possess certain resources that firms need (Machold and Farquhar, 2013; Hillman and Dalziel, 2003) such as abilities, skills and expertise that may contribute to the management's strategic decision making processes (Knockaert and Ucbasaran, 2013) as well as help connect the business and boards with a network of potentially useful people and organisations . Hence, it is not surprising to find the market for directorships favouring some NEDs more than others leading to multiple board seats.

One strand of the literature has considered the association between firm outcomes and NEDs' board seats. Most such studies examine this association following irregular or extraordinary business events, such as a takeover, stipulation of new laws, financial distress, fraud, etc. (Harford and Schonlau, 2013; Bugeja et al., 2009; Coles and Hoi, 2003; Gilson, 1990; Harford, 2003), which may signal NEDs' competence. However, most firms do not face extraordinary circumstances, so other studies examine this under general circumstances on the premise that firms'

performance signal directors' effectiveness (Davidoff et al., 2014; Yermack, 2004; Ferris et al., 2003) and consequently, the number of board seats they hold.

Unfortunately, these studies have yielded mixed results suggesting that performance of NEDs' firms is not the only criteria on which board seats are allocated in the directorship market (Davidoff et al., 2014). This chapter examines whether the chance of NEDs getting external board seats in the UK is sensitive to their reputational capital as well as to their firm(s) financial performance. Hence, it better embraces the different stakeholders' perspectives on NEDs' roles and accountability (Huse, 2005). Unlike agency theory, the 'internal' perspective of accountability focuses on the role that NEDs of the right calibre can play in connecting the corporation with its environment (resource dependence theory) and contributing to competitive advantage of corporation through their reputational capital (the resource-based view) (Hillman and Dalziel, 2003; Huse, 2005; Machold and Farquhar, 2013). This would reflect in a higher demand for NEDs who possess these resources in the directorship market.

This chapter uses a large panel dataset of NEDs sitting on UK listed banks and other financial institutions (BOFIs) for a period of fifteen years (1999-2014). This offers a number of unique setting in which to investigate the effectiveness of directorship market as incentive mechanism. First, compared to other jurisdictions, shareholders in the UK are well protected and enjoy more rights (e.g. say on pay, one share-one vote standard, AGM nomination). Furthermore, in contrast to the US, making changes to companies' boards in the UK is fairly easier due to its soft law approach (comply or explain) (Zaman et al., 2011), the absence of any restrictions on hiring and firing directors (e.g. no staggered boards) (Mira et al., 2018) and the dominance of institutional investors who have the resources to discipline directors (Office for National Statistics, 2012b). Second, due to their unique governance structure, most studies hardly consider highly regulated industries such as the financial sector (White et al., 2014; Yermack, 2004). Focusing on financial sector is important as the stakeholders' understanding of NEDs' role might be different; for instance, Minichilli et al. (2009) suggest that boards' tasks (e.g. advice, strategic participation and output control) in regulated industries are more demanding which may affect the way board seats are allocated in directorship

market. In addition, the greater responsibility and expectations of NEDs in these sectors by shareholders, regulators and depositors may attract more attention on their appointments in the directorship market.

Third, the recent financial crisis provides an ideal natural setting for studying the market for directors in which BOFIs' boards are greatly scrutinised by different stakeholders. Even more importantly, the period of study coincides with the launch of several governance reforms that expected to directly affect the UK directorship market (e.g. Walker Review, 2009; UK Corporate Governance Codes, 2010, 2012, 2014; Stewardship Code, 2010; Davies Review, 2011 and Senior Managers Regime, 2012). Regulators' attempts in these post-crisis reforms to boost the level of boards' competency and shareholders' involvement may strength the sensitivity of NEDs' board seats to their reputational capital and firm(s) financial performance. The chapter therefore provides partial evidence on how successful the post-crisis reforms are in increasing the effectiveness of employment market as incentive mechanism.

4.3. Research Questions

As mentioned in Chapter 1, the general objective of this part of the study is to investigate to what extent NEDs in the UK market are subjected to an external sanction system whereby NEDs are rewarded (penalised), based on their firm performance and reputational capital, through gaining (losing) an external board seat. Thus, it contributes to the literature on market for directorships by specifically seeking answers to the following research questions:

Q5a. Is there a significant relationship between the number of board seats and performance of firms affiliated to the NEDs?

Q5b. Is there a significant relationship between the number of board seats and NEDs' reputational capital (i.e. educational qualifications, social network and governance experience)?

Q5c. Is there a significant change in the relationship between number of board seats and the NEDs' affiliated firms' performance and NEDs' reputational capital in the post-crisis period?

To the best knowledge of the researcher, this study is the first to provide empirical evidence specifically in the UK financial sector based on a large dataset (i.e. 11,386 unique NED-year observations) of NEDs serving on boards of 366 BOFIs covering a 15-year period (i.e. 2000–2014 inclusive).

4.4. Institutional Background, Literature Review and Hypotheses Development

4.4.1 Regulatory Aspects of Directorships in the UK Financial Sector

Directors' nomination, appointment and remuneration have received substantial attention, particularly following the financial crisis. The Walker Review (2009) attributed the crisis not only to serious deficiencies in prudential oversight and financial regulation but also major governance failures. The UK Combined Code on Corporate Governance (FRC, 2003, 2008), the UK Corporate Governance Code (FRC, 2010a) and the Walker Review (2009) made a number of recommendations regarding NEDs' appointment particularly in BOFIs, in the case of the latter. The Combined Code highlights the importance of board diversity and members having a balance of experience and skills (see §A.4.2 of the Code).[54] Similarly, NEDs' qualities, experience and abilities, including having an independent mind and getting the right mix of financial industry capability and critical perspectives from high-level experience in other major businesses, are among the Walker Review's (2009) thirty-nine recommendations for the sector. Thus, there have been higher expectations for boards of BOFIs to appoint NEDs with the right kind of skills and experience following the financial crisis.

[54]The amended code in 2010 (the Code), which was described by FRC as "limited but significant", emphasised on the benefits of board diversity including gender when considering new appointments. It also encouraged the chairmen to personally report in their annual statements "how the principles relating to the role and effectiveness of the board have been applied" and recommended that the evaluation of the boards of FTSE 350 firms should be conducted externally at least every three years.

The Combined Code (FRC, 2008) constrains executive directors from taking on more than one non-executive directorship in a FTSE100 company or the chairmanship of such a company (see §B.3.3 of the Code). It also requires the board to clearly state in the letter of appointment the expected time for a NED's involvement on the board (see §B.3.2 of the Code). Likewise, NEDs must disclose any other significant commitments (specifying the time involved) to the board before the appointment and inform the board of any subsequent changes to these (see §B.3.2 of the Code). Following the financial crisis, NEDs of FTSE 100-listed banks and comparable unlisted entities are advised to increase the board overall time commitment within the firm (Walker, 2009). Once appointed, NEDs are subject to re-election at intervals of no more than three years (every year for FTSE 350 firms) and can only serve no more than nine years to be considered as independent (see §A.3.1 and §A.7.2 of the Code).[55] The Combined Code further identified seven criteria for NEDs to be classified as independent (see §A.3 of the Code). These recommendations are all aimed at preventing NEDs, especially those serving on BOFIs' boards, from accumulating board seats and not giving their full commitments to the expected responsibilities. Although the Combined Code discourages NEDs from taking on too many directorships and to consider expected time commitments before undertaking the role, there is no optimal limit as a result of its 'comply or explain' approach.

Given the significant impact of BOFIs on the economy, NEDs serving on such boards must also comply with any other rules issued by the FCA and the PRA, as outlined in Chapter 2. Under the Financial Services and Markets Act (2000), NEDs in regulated firms require approval before they are being allowed to exercise any governing functions (known as the Approved Persons Regime). Specifically, they must pass a 'fit and proper' test, comply with the 'Statements of Principle and the Code of Practice' and report anything that could impair their accountability. More recently, the UK PCBS (2013) emphasises that senior level individuals (including NEDs) must be fully aware of and accountable for their assigned responsibilities. Under the new regime known as Senior Managers

[55] One of the most controversial changes made to the Code in 2010 is related to enhancing accountability whereby all directors of FTSE 350 firms are recommended to be subjected to re-election every year.

and Certification Regime (SM&CR), NEDs may face potential criminal liability for decisions leading to the firm's failure (Parliamentary Commission on Banking Standards, 2013). This may have repercussions on board seats as NEDs may be more cautious in accepting appointments to serve on BOFIs' boards which may consequently shrink the market for NEDs in this sector. The following sections review relevant studies related to board seats and develop the hypotheses for this study accordingly.

4.4.2 Board Seats and Affiliated BOFIs' Performance

Assessing an individual NED's effectiveness is challenging partly because of difficulties in observing actual board room actions (Perkins and Hendry, 2005), and also due to board decisions being usually made jointly. Researchers, therefore, seek observable and unique signals such as NEDs' actions during extraordinary events. Numerous researchers of these extraordinary events noticed how directors often lose directorships if the outcome reduces shareholders' wealth (see, Brochet and Srinivasan, 2014; Bugeja et al., 2009; Fich and Shivdasani, 2007; Coles and Hoi, 2003). In contrast, albeit using pre-millennium US data, Ferris et al. (2003) and Yermack (2004) were among the first to examine the market for directorships under non-extraordinary or general conditions by looking at the financial performance of firms where NEDs serve. They found mixed results regarding the associations between financial performance and the number of NEDs' current and future directorships (i.e. board seats).

For NEDs in the financial sector, corporate failure of their affiliated BOFIs may cause regulators to presume them guilty of negligence while shareholders and depositors may lose confidence in their credibility, possibly causing them to lose board seats. In contrast, good performance by such BOFIs may signal that they have successfully exercised proper checks and balances in ensuring that management has not taken excessive risks or embarked on possible detrimental strategies for shareholders, depositors and policyholders. This may increase demand for their services, and in turn, increase their board seats. Therefore, using both accounting

and market-based measures of performance of BOFIs affiliated to NEDs, the first hypothesis, is stated as follows:

> *H1: There is a significant positive association between the financial performance of BOFIs where the NED serves as a board member and the NED's total number of board seats.*

4.4.3 Board Seats and Reputational Capital

The inconclusive results in prior studies on the associations between firms' performance and number of board seats suggest that NEDs' appointments are possibly based on other criteria than their affiliated firms' performance. Hence, researchers are increasingly redirecting their attention to NEDs' other competencies (White et al., 2014; Anderson et al., 2011). As the financial sector is highly regulated and competitive, BOFIs need NEDs with managerial, professional and technical skills on their boards, echoing the recommendations in both the Combined Code (see §A.4.3 of the Code) and the Walker Review (2009) calling for NEDs to have a balance of experience and skills. NEDs' with good networks are also desired by BOFIs to help them exploit new market opportunities both domestically and overseas as well as achieve strategic goals, stay competitive, and comply with rules and regulations. Hence, the number of board seats held by BOFIs' NEDs may be highly dependent on the different forms of reputational capital that they may bring to enhance board effectiveness. This study focuses on NEDs' qualifications, social network and governance experience as possible determinants of board seats.

NEDs' educational backgrounds may influence their social status, professional paths and networking (Useem and Karabel, 1986). Such important factors for career development may consequently influence NEDs' board seats (Acharya and Pollock, 2012; Anderson et al., 2011). In the context of financial sector, NEDs with educational background in risk management and/or finance are expected of BOFIs' boards (Dodd-Frank-Act, 2010; Walker, 2009).[56]

[56] In the US, the Dodd-Frank Act (2010) requires directors to have "... a bachelor's degree or higher from an accredited college or university in risk management, business administration, finance, economics...to demonstrate minimum competence in risk management [p.415]".

The literature also highlights the role social network and connections play in the market for directorships (Wilson et al., 2013; Anderson et al., 2011; Harford, 2003). Networking is valuable as connections with peer companies enable firms to access important information, especially when a firm is planning strategic alliances, mergers or acquisitions, or is expanding into new markets (Mazzola et al., 2014; Renneboog and Zhao, 2011).[57] White et al. (2014) suggest that directors with extensive social network tend to have stronger geographic connections and multiple board seats. Furthermore, NEDs who have made themselves reputable figures within society often have access to politicians, government, employers' organizations, regulators and other professional networks. Such connections are valuable, particularly in highly regulated sectors such as the financial sector.

Another valuable resource that firms desire in NEDs is their board or governance experience, which the literature has measured in different ways (Baran and Forst, 2015). Coles and Hoi (2003) assessed governance experience based on membership in the capital market's top 100 firms, arguing that NEDs serving on such boards with complex business operations will have more valuable experience. In addition, sub-committee (i.e. audit, remuneration and nomination) experiences enhance NEDs' skills which may consequently increase demand for their services and in turn their board seats. Harford and Schonlau (2013) and Lai and Chen (2012) considered more specific experiences and found directors who have participated in an acquisition's decision making process and have foreign direct investment experiences, respectively are more likely to be rewarded with additional board seats.

In short, NEDs' reputational capital, based on their educational qualifications, social network and governance experience, is an important determinant of their board seats. Hence, the second hypothesis is as follows:

[57]The role of directors' network has been discussed differently in the literature. On one hand, director network can be a proxy for 'cosy club', whereby network is seen as contributing to agency problem and perceived as negative. On the other hand, proponents of resource dependence theory perceive directors' network to be a valuable resource that would benefit firms through access to information, politicians, and regulators. Most studies do not distinguish between these two views of network except for Renneboog and Zhao (2011, 2014) who examined if CEO's network are built for gathering information or for managerial dominance.

H2: There is a significant positive association between a NED's reputational capital, based on the NED's professional and educational qualifications, social network and governance experience, and the NED's total number of board seats.

4.4.4 Board Seats and the Financial Crisis

The financial crisis has partially been attributed to failure of the boards' check and balance mechanisms as well as negligence and naivety of NEDs in allowing excessive risk-taking by management (Cornett et al., 2009). Regulators responded by amending the UK Corporate Governance Code (FRC, 2010a) (formerly the Combined Code) in parallel with Sir David Walker's review of corporate governance in the financial sector. In the same year, the FRC also launched its first Stewardship Code (FRC, 2010b) for institutional investors, which aims to promote better stewardship of investee firms and to "enhance value and accountability to the ultimate beneficiaries".[58] Subsequently, capital market players and the media have given more attention to who gets appointed to this highly regulated industry's boards.

Many studies have examined corporate governance issues pre- and post-crisis to observe how the market has changed and to anticipate how successful regulators' endeavours might be in preventing future crises (Gupta et al., 2013; Aebi et al., 2012; Erkens et al., 2012). However, studies focusing on board structures are mostly centred on remuneration and independence issues (Minton et al., 2011; Cornett et al., 2009) and their effect on firms' performance. The post-crisis reforms in corporate governance and regulations which call for boards to consider the skills and experience of and the time commitment expected from NEDs when making appointments (see, FRC, 2010a; Walker, 2009) as well as holding NEDs accountable under the new SM&CR (see, Parliamentary Commission on Banking Standards, 2013), make it imperative to examine if there have been significant changes in the relationship between board seats and the two determinants (i.e.

[58] For instance, the first principle of the Stewardship Code encourages institutional investors to exercise proxy voting.

performance of BOFIs where the NEDs serve and NEDs' reputational capital) in the post-crisis period. Thus, the next two hypotheses are as follows:

> *H3a: The positive association between the financial performance of BOFI(s) where the NED serves as a board member and the NED's total number of board seats is more significant for the post- financial crisis period than the pre-crisis period.*

> *H3b: The positive association between the NED's reputational capital, based on the NED's professional and educational qualifications, social network and governance experience, and the NED's total number of board seats is more significant for the post-financial crisis period than the pre-crisis period.*

4.5. Research Design

4.5.1 Sample and Data Collection

The sample comprises all NEDs on the boards of all BOFIs listed on the London Stock Exchange (LSE) between 2000 and 2014.[59] Construction of the dataset first involved identifying all listed firms falling under section K of the SIC which includes bank, insurance, investment, life assurance and other financial firms (BOFIs).[60] This resulted in the identification of 366 BOFIs. Using the BoardEx database, the next step involved extracting the names of NEDs from the list of 366 BOFIs identified earlier and finding the number of board seats they held each year for the 15-year span, resulting in 11,386 unique NED-year observations.

Accounting and capital market performance information and other financial data for the control variables were then downloaded from the Datastream

[59]This study chose this 15-year period as it enables the capture of the developments in the corporate governance environment such as increase in scrutiny by stakeholders through shareholders' activism and media surveillance, and regulatory changes like the Walker Review (2009) that focused on corporate governance in the UK banking industry.

[60]Section K of the SIC is the UK standard industrial classification of economic activities in 2008.

database.[61] Other NEDs' and board-related information were extracted from BoardEx and annual reports. Table 4.1 presents a summary of the operationalisation of the variables used in this study.

4.5.2 Model Specification and Variable Construction

Since this study examines factors associated with the number of board seats held by NEDs in the UK financial sector, the model's two main independent variables are the performance of BOFI(s) affiliated to the NEDs and a vector of variables related to the NEDs' reputational capital, while controlling for other personal and firm-related variables. Given the ordinal nature of the dependent variable (i.e. number of board seats), An ordered logit model (Harford and Schonlau, 2013; Brickley et al., 1999) was used to test the hypotheses.[62] The model to be tested is thus as follows:

$$Number\ of\ Board\ Seats\ _{i,t+1} = \alpha_0 + \beta_1\ NEDs'\ affiliated\ BOFI(s)\ performance\ measures\ _{i,t-2} + \beta_2\ NEDs'\ Reputational\ Capital\ _{i,t} + Control\ Variables\ _{i,t} + \epsilon_{i,t} \tag{4.1}$$

4.5.2.1 Dependent Variable: NEDs' Number of Board Seats in Quoted Firms

Consistent with the literature (Harford and Schonlau, 2013; Ferris et al., 2003), the dependent variable is the total number of board seats a NED holds each year over the sample period (15 years). Specifically, the dependent variable in year t for each observation in this panel is the number of external directorships held by the NEDs in year t+1. We refer to board seats held by the NEDs at other firms as external directorships.

[61] The NED-year observations cover the period from 2000-15. However, stock market and accounting data downloaded from Datastream are from 1998-2014 due to the inclusion of lagged variables. In constructing the dataset, two large databases i.e. BoardEx and Datastream were mainly matched.

[62] Since the number of board seats is a discrete non-negative integer value, as a robustness check, Poisson regression model was also used (Fich and Shivdasani, 2006).

Table 4.1
Operationalisation of the Variables

Variable	Description	Source
Dependent		
Number of board seats in quoted firms	The total number of board seats held by NEDs in quoted firms on the report date selected.	Annual Reports, BoardEx
Independent: Performance of BOFI(s) affiliated to the NEDs		
Market adjusted stock return	The BOFI's annual stock return, net of the FTSE All Shares index.	Datastream
ROE	The BOFI's annual return on equity.	Datastream
Independent: NEDs' reputational capital		
Educational qualifications	NED's total number of professional and academic qualifications in year (t).	BoardEx
Social networks	NED's total number of connections with other directors, whether past or present via their directorships. These links are captured through detecting a date overlap of directors sitting on boards, whether quoted, private, not for profit, or other. This is the method used by BoardEx in identifying number of social networks.	BoardEx
Average years of governance experience in quoted firms	The total length of time spent by the NED at board level of quoted firms divided by the number of these firms.	BoardEx
Audit committee membership	A dummy variable that equals to 1 if the NED is in the audit committee, 0 otherwise.	BoardEx
Remuneration committee membership	A dummy variable that equals to 1 if the NED is in the remuneration committee, 0 otherwise.	BoardEx
Nomination committee membership	A dummy variable that equals to 1 if the NED is in the nomination committee, 0 otherwise.	BoardEx
Control: NEDs' other characteristics		
Tenure	The number of years spent by the NED in the focal financial firm.	BoardEx, Annual reports
Age & Age^2	NED's age in a particular year (t) and NED's age in a particular year squared. [a]	BoardEx, Annual reports
Gender	A dummy variable that equals to 1 if the NED is a female, 0 otherwise.	BoardEx
Independence	A dummy variable that equals to 1 if the NED is reported as independent in the firm's annual report in a given year, 0 otherwise.	BoardEx, Annual reports
Busy NEDs	A dummy variable that equals to 1 if the NED has three board seats[b] or more in a given year, 0 otherwise.	BoardEx
Chairmanship	A dummy variable that equals to 1 if the NED is a chairman in year (t), 0 otherwise.	BoardEx, Annual Reports
Busy chairman (Chairmanship in big firm)	An interaction variable of chairmanship and firm size.	BoardEx, Annual Reports
Control: BOFIs' characteristics		
Firm Size (ln TA).	Natural log of total assets.	Datastream
Sub-Sectors	Dummy variables to control for sub-sectors in the sample.	BoardEx
Year	Year indicator variable.	

[a] Age squared was used to capture the quadratic relationship between a NED's number of board seats and his/her age.

[b] Consistent with some studies (Fich and Shivdasani, 2006; Ferris et al., 2003), three board seats were used as a threshold of director's busyness. As a robustness check, similar to Harris and Shimizu (2004), four board seats as a threshold of director's busyness is also used.

4.5.2.2 Independent Variable: Performance of NEDs' affiliated BOFIs

NEDs may concurrently hold multiple board seats and it is vital to identify which firm(s) to be the focal firm for assessing performance.[63] Since the interest is on NEDs in the financial sector, the focal firm's performance of interest will thus be the BOFI affiliated to the NED. When there is more than one affiliated BOFI, then the measure of performance will be based on the weighted average of those BOFIs. Performance of BOFIs is assessed based on both market and accounting measures.

Most studies on market for directorships tend to use only market-based measures as they reflect firms' performance from shareholders' perspective and are deemed more future-oriented (Kennedy and Limmack, 1996). The common market-based measures used include the firm's annual stock return adjusted for either market (Yermack, 2004), industry (Fischer et al., 2009; Mikkelson and Partch, 1997) or size (Dahya et al., 2002; Mikkelson and Partch, 1997).

However, using market-based measures has been criticised for possible contamination by noise in the equity markets (Fischer et al., 2009). Therefore, others have instead suggested using accounting-based measures such as return on assets (Doucouliagos et al., 2007; Renneboog and Zhao, 2011) and its variations including industry-adjusted ROA (Harford and Schonlau, 2013; Fischer et al., 2009) and average ROA (Eminet and Guedri, 2010; Dahya et al., 2002), operating margin (Ferris et al., 2003; Mikkelson and Partch, 1997), sales growth (Colpan and Yoshikawa, 2012), return on equity (Colpan and Yoshikawa, 2012; Doucouliagos et al., 2007) and earnings per share (Doucouliagos et al., 2007). Performance of BOFIs in this study is assessed based on both market and accounting measures. Specifically, ROE and market adjusted annual stock return are used as proxies for accounting and market measures, respectively.[64]

[63] The literature identifies the focal firm differently. Ferris et al. (2003) consider it to be where the NED works as an executive director while Yermack (2004) treat it as the firm(s) where s(he) works as a NED. This study adopts a similar approach to Yermack (2004), i.e. when the NED works in several focal firms, then the weighted average of their financial performance was used.

[64] As a robustness check, other accounting measures (i.e. EPS, and ROA) were also considered instead of ROE.

The literature highlights that the associations between firms' performance and number of board seats are not necessarily contemporaneous (Mikkelson and Partch, 1997) as it takes time for the market to observe and digest signals about directors' competence which may cause the association to persist (Doucouliagos et al., 2007). Hence, many studies consider firm performance lagged for at least two years in the case of other directors (including NEDs) and one year for CEOs. Since the focus of this study is on NEDs, firms' performance is lagged for two years in all the regression models, which is a reasonable time in the UK context as the Combined Code (FRC, 2003, 2008) specifies a period of no more than three years for directors' re-election. Most corporate governance literature also recommends using lagged firm performance to overcome potential endogeneity problems (Melis et al., 2015; Mura, 2007; Bozec, 2005). While strong performance of BOFIs affiliated to NEDs may be linked to increase in the number of board seats, having multiple board seats may also affect performance of BOFIs affiliated to NEDs, giving rise to endogeneity problem. To overcome this problem, the lagged measures of performance were used as the independent variable (Melis et al., 2015; Aebi et al., 2012; Colpan and Yoshikawa, 2012; Anderson et al., 2011; Renneboog and Zhao, 2011). The Durbin-Wu-Hausman chi-squared test for board seats-performance regressions also confirmed the exogeneity of lagged performance.

4.5.2.3 Independent Variable: NEDs' Reputational Capital

Three vectors were used to measure NEDs' reputational capital: educational qualifications, social network and governance experience. Directors' educational knowledge is usually measured either as a continuous variable where the NED's highest level of education is coded as PhD, postgraduate degree, undergraduate degree or other (Zhu et al., 2014), or by examining the types of degrees a director has (Anderson et al., 2011). This study considered NEDs' educational qualifications based on number of their professional and academic (e.g. undergraduate level and above) qualifications.[65]

[65] Given the large dataset and reliance on BoardEx for information, it was not feasible to identify more specific industry qualifications such as banking, risk management, economics, etc. This is only possible if data is collected manually. This is addressed as one of the limitations in the thesis.

The literature identifies NEDs' social network using different proxies such as number of directorships (Harford and Schonlau, 2013; Yermack, 2004; Ferris et al., 2003), proximity of directors' home address to their firms' headquarters (Wilson et al., 2013; Anderson et al., 2011) and attendance at the same educational institution (Cohen et al., 2010). Renneboog and Zhao (2011) measure social network based on director centrality. Similar to Goh and Gupta (2016), the size of social network provided in the BoardEx database is used in the study as it reflects the total number of other individuals that are connected with the NED from his/her previous and current employment.

To capture NEDs' governance experience, four different proxies were used: the average time the NED spent at board level within the quoted companies (Anderson et al., 2011; Coles and Hoi, 2003) and NEDs' sub-committee memberships in the audit, remuneration and nominations committees. Those three are the primary sub-committee boards defined in the Combined Code (FRC, 2003, 2008) and the UK Corporate Governance Code (FRC, 2010a).

4.5.2.4 Control variables

Several control variables related to NEDs' other characteristics were also considered to avoid model misspecification. This included NEDs' tenure in current firm, chairmanship position, gender (Renneboog and Zhao, 2011; Yermack, 2004) and independence.[66] The model also control for NEDs' age. It is worth mentioning that several studies considered director's age as a proxy for experience (see e.g. Wilson et al., 2013; Renneboog and Zhao, 2011; Eminet and Guedri, 2010; Doucouliagos et al., 2007). Although age may capture a NED's general experience, it may not be a good proxy for the different types and levels of experience which are valued differently in the market for directorships; hence age was used

[66]Independence of NEDs is measured as a binary variable, hence does not count for the possibility of "grey" NEDs. Studies that distinguish between "grey" and "independent" directors usually collect the data manually from annual reports provided that conflicts of interest are being disclosed (Borokhovich et al., 2013; Yermack, 2004). Given the large dataset, a director is strictly classified as independent only if the firm clearly states in the annual report that s(he) is independent, otherwise the NED is classified as non-independent NED.

as a control variable in this thesis. Indeed, directors' age in the sample was not highly correlated to their qualities (see Table 4.5).

Since the likelihood of accepting additional board seats could be due to a conscious decision by a NED who is approaching retirement, the variable age squared is included in the model to control for this effect. In addition, 'busy' NEDs and 'busy' chairman may be less inclined to accept seats, and they were included as additional control variables in the model. The proxy for 'busy' NEDs is based on the number of board seats the NEDs have (Harford and Schonlau, 2013; Yermack, 2004; Ferris et al., 2003) while for 'busy' chairman, it is based on the NED's chairmanship position in large firms.[67] Control for firms' characteristics include firm size (Harford and Schonlau, 2013; Renneboog and Zhao, 2011; Mikkelson and Partch, 1997), BOFIs' sub-sectors (banking, investment, life assurance, insurance and other financial firms) and also year to capture all unobserved factors related to each year.[68]

4.6. Data Analysis and Findings

4.6.1 Descriptive Statistics

Table 4.2 presents the descriptive statistics for the performance of BOFIs affiliated to the NEDs (Panel A), NEDs' reputational capital (Panel B), NEDs' other characteristics (Panel C) and BOFIs' characteristic (Panel D). As Panel A shows, the mean for ROE is 3.1%, while the mean for market-adjusted return is -4.5%, and its median is 1%, indicating a left-skewed distribution.

Panel B indicates the NEDs' educational qualifications to be on average two and as many as four. Similar to Goh and Gupta (2016), a NED in the sample has

[67] Consistent with some studies in the literature (Fich and Shivdasani, 2006; Ferris et al., 2003), the number of three board seats were used as a threshold for NEDs' busyness. As a robustness check, similar to Harris and Shimizu (2004), this study also used four board seats as another threshold of director's busyness.

[68] Due to the diverse nature of financial firms included in the sample, controlling for firms' leverage is not feasible. Consistent with literature, controlling for firm size is deemed sufficient to partiality control for firm growth opportunities.

Table 4.2
Descriptive statistics for Independent Variables of Chapter Four

Variable	Obs.	Mean	Std. Dev.	5th	50th	95th
Panel A: Performance of BOFI(s) affiliated to the NEDs						
Market Adj. Stock Return$_{(t-2)}$	2,249	-4.5%	35%	-69%	1%	40%
ROE$_{(t-2)}$	2,245	3.1%	32%	-42%	3.1%	43%
Panel B: NEDs' reputational capital						
Number of professional & educational qualifications	11,182	1.6	1.3	0	1	4
Social network (number of connections)	11,386	559	737	13	265	2157
Governance experience in quoted firms (years)	10,994	3.7	4.3	0	2.7	12
Audit committee membership (dummy variable)	11,386	0.69	0.46	0	1	1
Remuneration committee membership (dummy variable)	11,386	0.48	0.5	0	0	1
Nomination committee membership (dummy variable)	11,386	0.6	0.49	0	1	1
Panel C: NEDs' other characteristics						
Tenure in the focal financial firm (years)	11,182	5.9	5.5	0.3	4.5	16
Age (years)	11,109	59	8.5	43	60	71
Gender (female)	11,182	0.093	0.29	0	0	1
NED Independence (dummy variable)	11,386	0.77	0.42	0	1	1
Busy NEDs (dummy variable)	11,179	0.13	0.34	0	0	1
Chairmanship (dummy variable)	11,386	0.19	0.39	0	0	1
Panel D: BOFIs' characteristic						
Size of total assets (£ million)	2,457	27,074	158,076	2.6	157	66,073

on average 559 connections with other directors and as many as 2,157 connections in general. The average governance experience of NEDs in quoted firms is almost four years, with very few having more than 12 years. As for sub-committee memberships, about 70% of NEDs has experience as members of the audit committee, 48% in the remuneration committee and 60% in the nomination committee.

As Panel C shows, the average tenure of NEDs serving on BOFIs' boards is about 6 years with a median of 4.5 years, suggesting that most NEDs do not serve beyond 9 years as recommended in the Corporate Governance Code (FRC, 2010a). The average (median) age of NEDs in BOFIs' boards is 59 (60), which is not surprising as such roles are often offered to more senior individuals. Reflecting the regulatory demands for appointing NEDs who are independent of management, 77% of NEDs in BOFIs are independent. Similar to Brammer et al. (2009), the average for women NEDs is 9.3%. Panel D presents performance and size of BOFIs and as indicated, the mean and median size of BOFIs are £27b and £157m, respectively.

Table 4.3 presents the number of board seats held by NEDs for the full period (Panel A) and the pre- and post-financial crisis periods (Panel B). As Panel A shows, for the 15-year span, 50.3% of NEDs held only one board seat in quoted firms while only 13% held four or more seats, accounting for 25% and 33% of total board seats, respectively. Based on Panel B, the percentage of NEDs holding one board seat increased by 11% (accounting for 28%) while those holding four or more decreased by 6% (accounting for 28.8%) in the post-crisis period. These figures respectively suggest that NEDs serving on BOFIs has relinquished some of the board seats possibly due to increased expected time commitment as recommended in the Walker Review (2009) and the Corporate Governance Code (FRC, 2010a).

Table 4.4 reports the univariate characteristics of NEDs. Panels A and B cover the number of board seats based on BOFIs' index and sub-sector while Panels C and D present NEDs' reputational capital and other characteristics during the pre- and post-financial crisis periods. The last two columns report significance levels of the mean differences between the two periods based on T-tests and Wilcoxon test.

Table 4.3
Breakdown of Number of Board Seats Held by NEDs Between 2000 to 2014 and the Pre- and Post- Financial Crisis

Panel A

Number of board seats	Frequency	Percentage of NEDs	Total number of board seats	Percentage of board seats
1	5,629	50.35%	5,629	24.75%
2	2,678	23.96%	5,356	23.55%
3	1,406	12.58%	4,218	18.55%
4	675	6.04%	2,700	11.87%
5 or more	791	7.08%	4,840	21.28%
Total	11,179	100%	22,743	100%

Panel B

	Pre-Crisis (2000-07)				**Post-Crisis (2009-14)**			
Number of board seats	Frequency	Percentage of NEDs	Total number of board seats	Percentage of board seats	Frequency	Percentage of NEDs	Total number of board seats	Percentage of board seats
1	1593	43.29%	1593	19.23%	3536	54.22%	3536	28.39%
2	973	26.44%	1946	23.50%	1479	22.68%	2958	23.75%
3	495	13.45%	1485	17.93%	791	12.13%	2373	19.05%
4	265	7.20%	1060	12.80%	353	5.41%	1412	11.33%
5 or more	354	9.62%	2198	26.54%	362	5.55%	2178	17.48%
Total[a]	3,680	100.00%	8,282	100.00%	6,521	100.00%	12,457	100.00%

[a]The totals for frequency and number of directorships in Panel A and Panel B do not tally as the year for the financial crisis (2008) is dropped in the latter.

NEDs' board seats, based on BOFIs' index and sub-sectors (Panels A and B), are significantly different at the 1% level for both periods (lower for the post-crisis period). Panel C shows all the reputational capital variables to be significantly different at the 1% significance level between the two periods (higher for the post-crisis period except for educational qualifications and remuneration committee membership). All other variables are also significantly different at the 1% level (higher in the post-crisis period except for busy NEDs which is lower).

Table 4.4
Mean Board Seats, Reputational Capital and Personal Characteristics of NEDs Serving on Boards of Bofis Pre- and Post- the Financial Crisis Periods

Variable	**Pre-Crisis (2000-07)**	**Post-Crisis (2009-14)**	**T-Test**	**Wilc-oxon**
Panel A: Board seats in BOFIs by indices				
FTSE 100	2.51	2.03	***	***
FTSE 250	2.31	1.96	***	***
FTSE SMALL CAP	2.18	1.95	***	***
FTSE AIM All-Share	1.86	1.49	***	***
FTSE FLEDGLING	2.49	1.96	***	***
Total	2.28	1.89	***	***
Panel B: Board seats in BOFIs by sub-sectors				
Banks	2.20	2.04	***	**
Insurance	2.56	1.86	***	***
Investment	2.28	2.00	***	***
Life Assurance	2.57	1.83	***	***
Private Equity	3.70	2.51	***	***
Other Finance	1.98	1.71	***	***
Total	2.25	1.91	***	***
Panel C: NEDs' reputational capital				
Number of professional & educational qualifications	1.67	1.59	***	***
Social networks	0.54	0.58	***	***
Governance experience in quoted firms	3.50	3.81	***	***
Audit committee membership	0.63	0.71	***	***
Remuneration committee membership	0.49	0.47	***	***
Nomination committee membership	0.51	0.64	***	***
Panel D: NEDs' other characteristics				
Tenure (years)	5.42	6.25	***	***
Age (years)	57.32	59.56	***	***
Gender(female)	0.07	0.11	***	***
Independence	0.74	0.79	***	***
Busy NEDs	0.17	0.11	***	***
Chairmanship	0.19	0.19	-	-

‡ Level of significance for correlations are ***:0.01, **:0.05, *:0.1.

Table 4.5 presents the correlation matrix for all variables. It shows a significant and positive relationship between number of board seats and performance of BOFI(s) affiliated to the NEDs based only on the market adjusted stock return. There is also a significant positive association between the number of board seats and all of the NEDs' reputational capital variables. Furthermore, the table shows a significant positive relationship between number of board seats and age, gender, independence, chairmanship, busy NEDs and busy chairman but negatively significant for tenure in current firm. There is no multicollinearity problem between the independent variables. In addition, using more advanced measure of multicollinearity, all values of the VIF (variance inflation factor) are found to be below the critical level. Overall, the correlation matrix suggests the number of board seats held by NEDs is significantly associated with their reputational capital and only the market performance measure of their affiliated BOFIs.

4.6.2 Do BOFIs' Performance and Reputational Capital Affect NEDs' Number of Board Seats?

This section will cover the first two research question (RQ5a and RQ5b). Specifically, it will answer these questions:

- Is there a significant relationship between the number of board seats and performance of firms affiliated to the NEDs?
- Is there a significant relationship between the number of board seats and NEDs'reputational capital (i.e. educational qualifications, social network and governance experience)?

Table 4.6 (see page 144) presents the results for two sets of models. Firstly, models 1 and 2 examine the association between the number of board seats and performance of BOFI(s) affiliated to the NEDs, while controlling for a wide range of different NEDs' and firms' characteristics. The second set of models (i.e. models 3 and 4) replicates the first set but includes NEDs' reputational capital. Each model is reported based on market performance measure, then repeated based on accounting performance measure.

Table 4.5
Pearson Correlation Matrix of Chapter Four's Variables

	Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
1	Board Seats$_{(y+1)}$	1							
2	Market Adj. Stock Return$_{(t-2)}$	0.0207*	1						
3	ROE$_{(t-2)}$	0.0095	0.0347*	1					
4	Number of educational qualifications	0.1919*	0.0172*	0.0048	1				
5	Social networks	0.2423*	0.0289*	0.0125*	0.3010*	1			
6	Governance experience in quoted firms (years)	0.3346*	0.0257*	0.0094*	0.1092*	0.0821*	1		
7	Audit Comm. membership experience	0.2803*	-0.0017	-0.0032	0.0693*	0.0778*	0.2072*	1	
8	Remuneration Comm. membership experience	0.2536*	-0.0103*	-0.0033	0.0679*	0.0789*	0.2027*	0.6716*	1
9	Nomination Comm. membership experience	0.2646*	0.0585*	0.0212*	0.1090*	0.1299*	0.2352*	0.4031*	0.4129*
10	Tenure	-0.0447*	0.0749*	0.0119*	-0.0454*	-0.0745*	0.1559*	-0.0656*	-0.0569*
11	Age	0.2425*	0.0350*	0.0071	0.0656*	0.0444*	0.3862*	0.3168*	0.3232*
12	Gender (Female)	0.0299*	0.0195*	0.0083	0.0269*	0.0745*	-0.0541*	0.0376*	0.0267*
13	NED Independence	0.3283*	0.0527*	0.0185*	0.1274*	0.1827*	0.2386*	0.6142*	0.5461*
14	Busy NEDs	0.7228*	0.0119*	0.0053	0.1030*	0.1567*	0.1434*	0.0114*	-0.0051
15	Chairmanship	0.1652*	-0.0224*	-0.0057	0.0201*	-0.0029	0.2013*	0.0565*	0.1280*
16	Firm Size (log TA)	0.1902*	0.1784*	0.0606*	0.1914*	0.2960*	0.1387*	-0.0099*	-0.0169*
		(9)	**(10)**	**(11)**	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**
9	Nomination Comm. membership experience	1							
10	Tenure	0.0564*	1						
11	Age	0.3053*	0.2732*	1					
12	Gender (Female)	0.0558*	-0.0792*	-0.0998*	1				
13	NED Independence	0.5015*	-0.0879*	0.3616*	0.1027*	1			
14	Busy NEDs	0.0613*	0.005	0.0602*	0.0068	0.0297*	1		
15	Chairmanship	0.1593*	0.1566*	0.2673*	-0.0943*	0.0114*	0.0763*	1	
16	Firm Size (log TA)	0.2419*	0.0469*	0.1367*	0.0948*	0.2566*	0.0891*	-0.0790*	1

Table 4.6
Ordered Logit Models for NEDs' Board Seats in Quoted Firms Over 2000-2014

	Control Models		**Reputational Capital Models**	
Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Market Adj. Stock Return$_{(t-2)}$	0.073		0.097	
	(0.070)		(0.070)	
ROE$_{(t-2)}$		-0.001		-0.001
		(0.000)		(0.000)
Number of professional &			0.090**	0.094***
educational qualifications			(0.036)	(0.036)
Social networks			0.318***	0.302***
			(0.053)	(0.053)
Governance experience in			0.110***	0.111***
quoted firms (years)			(0.015)	(0.015)
Audit committee			-0.008	-0.012
membership experience			(0.095)	(0.095)
Remuneration committee			0.045	0.065
membership experience			(0.079)	(0.080)
Nomination committee			0.193**	0.202**
membership experience			(0.094)	(0.095)
Tenure	-0.029***	-0.027***	-0.050***	-0.049***
	(0.008)	(0.008)	(0.011)	(0.011)
Age	0.313***	0.341***	0.329***	0.363***
	(0.055)	(0.056)	(0.058)	(0.059)
Age^2	-0.003***	-0.003***	-0.003***	-0.003***
	(0.000)	(0.000)	(0.001)	(0.001)
Gender (Female NEDs)	0.165	0.180	0.244*	0.259**
	(0.136)	(0.136)	(0.129)	(0.129)
NED Independence	-0.012	-0.014	-0.016	-0.020
	(0.111)	(0.114)	(0.116)	(0.120)
Busy NEDs	5.484***	5.491***	5.397***	5.402***
	(0.113)	(0.111)	(0.117)	(0.115)
Chairmanship	0.790**	0.844**	0.974***	0.989***
	(0.353)	(0.366)	(0.367)	(0.380)
Busy Chairman	-0.048*	-0.051*	-0.068**	-0.069**
(Chairmanship × Firm Size)	(0.026)	(0.027)	(0.027)	(0.028)
Firm Size (log TA)	0.083***	0.091***	0.030	0.039
	(0.024)	(0.027)	(0.024)	(0.026)
Year Controls	YES	YES	YES	YES
Sub-Sectors Controls	YES	YES	YES	YES
Observations	9,875	9,979	9,753	9,856
Pseudo R2	0.289	0.291	0.311	0.313

Robust standard errors in parentheses. Level of significance for correlations coefficients are ***:0.01, **:0.05, *:0.1.

Shown here are ordered logit regressions in which the dependent variable in year t is the number of board seats held by NEDs in year t+1 in quoted firms and ranges from one to four board seats. Consistent with the literature, NEDs who have more than four directorships are coded as having four. Also, in untabulated regressions, the busy NEDs variable was replaced with the number of board seats a NED has in year t, and the results still hold. In untabulated regressions; accounting measurement of financial performance EPS$_{(t-2)}$ is found to be mostly insignificant. The standard errors are clustered by BOFIs' ID.

Regarding the association between board seats and performance of BOFIs affiliated to NEDs, contrary to expectation, all models show insignificant relationship, regardless of the measure used. This is consistent with a recent study in the US market (Davidoff et al., 2013) that found no significant association between BOFIs' stock return, lagged two years, and the NEDs' future number of board seats. Similarly, Yermack (2004) found no significant association between two years' lag of the market performance of non-financial firms and their NEDs' future number of board seats.[69] Yermack (2004) also reported insignificant association when accounting profits were used instead of stock returns as the proxy for performance. Overall, results in the current study indicate that performance of BOFI(s) affiliated to NEDs is not a significant determinant of board seats, thus rejecting the first hypothesis.

When NEDs' reputational capital variables (i.e. educational qualifications, social networks, and governance experience) were introduced in models 3 and 4, the first two variables indicate a positive significant relationship at the 1% level with number of board seats. For the governance experience variables, only NEDs' average years of experience on quoted boards and nomination committee experience are positively and significantly associated with board seats at the 1% and 5% levels, respectively.

However, experience in the other two sub-committee memberships (i.e. audit and remuneration) are insignificant. Thus, the second set of hypotheses is fully supported for only two vectors of reputational capital (i.e. qualifications and social networks) and partially supported for governance experience variables.

The significant positive association between academic and professional qualifications and number of board seats is unsurprising as NEDs' competency make them more attractive to the market. Similarly, the significant positive association between social network and board seats is expected as who the NEDs know may open up opportunities for appointments to other board seats. The significant

[69] Yermack (2004) found that only one year lag of performance was associated with board seats, at 5% significance level. Non-lagged performance was not significantly associated with the NEDs' future number of board seats.

positive association between board seats and the average years of experience in quoted firms' board is also not surprising as NEDs' governing and operating experience and knowledge of complex firms make them more attractive to the market for directorships. One possible explanation for the significant association between experience in nomination committee and number of board seats is that members of nomination committee could relatively have better access to the employment market. Although not significant, experience in remuneration committees has a positive effect on board seats while audit committee experience has a negative effect. The latter may possibly be attributed to greater commitment expected from such roles, thus causing NEDs themselves taking conscious decisions not to accept additional seats or the market itself not wanting to appoint NEDs serving on audit committees as they are often over-committed.

Other NED-specific characteristics (i.e. tenure, age, gender, independence and chairmanship) were also incorporated in the models. Tenure is significant but takes a negative coefficient with board seats as market may perceive NEDs as having cosy relationships with management that may restrict effective monitoring (Musteen et al., 2010).[70] While age has a positive effect, age squared has a negative effect on board seats, suggesting that as the NED gets older, the likelihood of getting new board seats declines.[71] Interestingly, gender takes a positive coefficient and is significant at the 10% and 5% levels in the expanded models (i.e. 3 and 4), suggesting that female NEDs are more likely to gain board seats. The significant positive association between board seats and chairmanship experience is not surprising as NEDs' experience in managing the boards make them more attractive to the market. NEDs' independence is not significantly associated with number of board seats.

All the models control for busy NEDs i.e. those who currently hold three board seats or more, because they may be less inclined to accept more board

[70] In contrast, long tenured NEDs are argued to be more effective monitors as they would have developed sufficient knowledge about the firm they oversee.

[71] Age-directorship relationship has been suggested in the literature as having an inverted U-shaped function because the benefits gained from experienced older directors might be offset by their being unenergetic as one grows older (Ferris, 2003). However, there was no strong correlation between directors' age and their qualities based on this study's sample.

seats. Contrary to expectations, the results suggest a positive and significant association between busy NEDs and number of board seats. Despite increased regulatory calls for limiting directors' board seats, the market still values NEDs with multiple directorships for their talent leading to more board seats – an observation called the "selection effects" (Falato et al., 2014). However, busy chairman (i.e. chairmanship in big firms) is found to be negatively and significantly associated with number of board seats possibly due to extensive time commitments expected from chairmanship in big firms which deter them from taking on more seats.

4.6.3 Did the Determinants of Board Seats Change After the Financial Crisis?

This section will cover the third research question mentioned in this chapter (RQ5c). Specifically, it will answer this question:

> ***- Is there a significant change in the relationship between number of board seats and the NEDs' affiliated firms' performance and NEDs' reputational capital in the post-crisis period?***

Table 4.7 (see page 149) incorporates the financial crisis into the models by splitting the sample into pre- and post-crisis periods: 2000–2007 and 2009-2014, respectively (excluding 2008, the year of the crisis).

Models 1 to 4 show the relationships between number of board seats and BOFIs' market and accounting performance and reputational capital based on ordered logit regression for the pre- and post-financial crisis periods, while controlling for the other directors' and firms' characteristics. Models 1 and 3 indicate insignificant association between BOFIs' performance, using both market and accounting measures, and board seats during the pre-crisis period. However, model 2 suggests that, post-crisis, the BOFIs' market performance is significantly related

to board seats at the 10% significance level but not for accounting performance, thus hypothesis 3a is partially supported.[72]

The discrepancy in results of seats-performance relationship pre- and post-crisis could be due to a number of reasons. For instance, the absence of relationship in the pre-crisis period can be attributed to the lack of shareholders' disciplinary mechanisms and/or shareholders' passivity. Also, pre-crisis, NEDs may not have been held responsible for firm performance by shareholders (Beltratti and Stulz, 2012; Erkens et al., 2012).

On the other hand, the significant positive association between firm performance and NEDs' board seats after the crisis may be attributed to BOFIs' directors being under the scrutiny of shareholders, regulators and other market players. In fact, shareholders' activism is said to have improved following the crisis, as indicated by the steady increase in the voting turnout and 'beyond expectation' positive response by the investment community to the UK new Stewardship Code (FRC, 2010b), with some companies reporting an increasing in investors' engagement (FRC, 2011).[73] Furthermore, NEDs are increasingly held accountable for BOFIs' performance and risk post-crisis, partly due to the regulators efforts. For instance, among the amendments in the UK Corporate Governance Code (FRC, 2010a) was clarification that directors' responsibility for risk extend beyond the

[72] Although both ROE and stock return of BOFIs post-crisis were positively associated with directors' board seats, only the stock return was significant. Consistent with Harford and Schonlau (2013), the results suggest that the market for directorships pays more attention to market rather than accounting performance. This reflects the heterogeneity of market players' perceptions of NEDs' effectiveness in terms of performance, as suggested by Colpan and Yoshikawa (2012). The results also support Fama and Jensen's (1983) hypothesis that outside directors [NEDs] can use performance as a signal of their effectiveness to the market which may lead to board seat(s). Market performance may be considered as a more "observable" signal, than an accounting measure.

[73] The average turnout in 2011 was 71% compared to 68% and 66% in 2010 and 2008, respectively (Institutional Shareholder Services, 2011).
In eighteen months since its launch, over 230 asset managers, asset owners and service providers signed up to the Stewardship Code (FRC, 2010b) and the momentum has continued ever since. Also, LSE witnessed an influx of firms with concentrated ownership structures (FRC, 2011), which may have spurred increased monitoring of directors in public listed companies. However, the UK market did not reach its full potential in terms of activism of shareholders due to barriers to stewardship such as lack of resources, limited influence due to holding size, difficulty in reaching a consensus among portfolio managers and shareholders (IMA, 2011).

Table 4.7
Ordered Logit Models for NEDs' Board Seats in Quoted Firms Pre- and Post- the Financial Crisis

VARIABLE	Market - Performance		Accounting - Performance	
	Model 1 Pre-Crisis	**Model 2 Post-Crisis**	**Model 3 Pre-Crisis**	**Model 4 Post-Crisis**
Market Adj. Stock Return$_{(t-2)}$	0.014	0.161*		
	(0.135)	(0.086)		
ROE$_{(t-2)}$			-0.000	0.000
			(0.000)	(0.001)
Number of professional & educational qualifications	0.109**	0.099**	0.102**	0.107**
	(0.042)	(0.047)	(0.040)	(0.047)
Social networks	0.241***	0.346***	0.260***	0.328***
	(0.092)	(0.056)	(0.091)	(0.058)
Governance experience in quoted firms (years)	0.098***	0.119***	0.101***	0.121***
	(0.019)	(0.016)	(0.019)	(0.016)
Audit committee membership experience	0.055	-0.046	0.027	-0.054
	(0.111)	(0.131)	(0.111)	(0.130)
Remuneration committee membership experience	0.011	0.063	0.049	0.070
	(0.114)	(0.094)	(0.116)	(0.095)
Nomination committee membership experience	0.158	0.261**	0.136	0.283**
	(0.127)	(0.110)	(0.129)	(0.111)
Tenure	-0.057***	-0.046***	-0.058***	-0.044***
	(0.015)	(0.012)	(0.015)	(0.012)
Age	0.293***	0.341***	0.351***	0.350***
	(0.080)	(0.079)	(0.088)	(0.078)
Age^2	-0.003***	-0.003***	-0.003***	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Gender (Female NEDs)	-0.272	0.484***	-0.265	0.498***
	(0.194)	(0.150)	(0.191)	(0.149)
NED Independence	-0.145	0.126	-0.145	0.126
	(0.136)	(0.157)	(0.139)	(0.163)
Busy NEDs	5.446***	5.363***	5.427***	5.377***
	(0.186)	(0.149)	(0.175)	(0.147)
Chairman	0.525	1.378***	0.593	1.257**
	(0.508)	(0.514)	(0.497)	(0.535)
Busy Chairman (Chairmanship × Firm Size)	-0.030	-0.103**	-0.037	-0.092**
	(0.037)	(0.040)	(0.036)	(0.041)
Firm Size (log TA)	0.047	0.026	0.067**	0.023
	(0.032)	(0.030)	(0.033)	(0.031)
Year Controls	YES	YES	YES	YES
Sub-Sectors Controls	YES	YES	YES	YES
Observations	3,220	5,623	3,225	5,680
Pseudo R2	0.321	0.305	0.324	0.306

Robust standard errors in parentheses. Level of significance for correlations coefficients are ***:0.01, **:0.05, *:0.1.

Shown here are ordered logit regressions in which the dependent variable in year t is the number of board seats held by NEDs in year t+1 in quoted firms and ranges from one to four board seats. Constant with the literature, NEDs who have more than four directorships are coded as having four. Also, in untabulated regressions, the busy NEDs variable was replaced with the number of board seats a NED has in year t, and the results still hold. In untabulated regressions; accounting measurement of financial performance EPS$_{(t-2)}$ is found to be mostly insignificant pre- and post- the crisis. The standard errors are clustered by BOFIs' ID.

simple oversight of control system. Similarly, the introduction of the Senior Management and Certification Regime promotes individual, rather than collective, accountability for the board's decisions.

Regarding reputational capital variables, educational qualifications, social networks, and governance experience in quoted firms, are all positively and significantly related to board seats in both pre-and post-crisis periods. As for other governance experience vector, the nomination committee experience is positively and significantly associated at the 5% significance level with board seats only for the post-crisis period. The significance of nomination committee membership could be mirroring the need for such experience in the post-crisis period which witnessed high directors' turnover. Unlike the other two board committees, audit committee membership is negatively associated (although insignificant) with board seats post-crisis, perhaps reflecting the criticisms on the role of audit committee members during the crisis.[74] Overall, hypothesis 3b is fully supported for educational qualifications and social network and partially supported for governance experience.

Gender is positively and significantly associated at the 1% level with the number of board seats in the post-crisis models (i.e. 2 and 4), echoing the call in the Davies Report (2011) for increased representation of women on FTSE 100 boards to at least 25% by 2015 (Mulcahy and Linehan, 2014).[75] Unsurprisingly, chairmanship experience is positively associated with board seats but busy chairmen are negatively associated with number of board seats in the post-crisis models at the 1% and 5% significance levels, respectively. This is in line with the recommendation in the Walker Review (2009) for chairmen of major banks to devote around two-thirds of their time to the business entity, hence constraining additional board seats opportunities. The results suggest a positive and significant association between busy NEDs and number of board seats in both pre- and post-crisis periods,

[74] A recent report by the FRC stated that audit committees' reporting is often unenlightening where very few audit committees disclose the key decisions taken by the committee. When restoring confidence in audit was needed, audit committees fail to demonstrate that they are carrying out their role diligently.

[75] Within six months of the launch of the Davies Report, female directors represented 22% and 18% of the directors appointed to FTSE100 and FTSE250 firms, respectively. Many of these female directors had no previous experience on FTSE 350 boards (FRC, 2011).

suggesting that the market still values such directors for their reputational capital. The impact of the other control variables is the same as in Table 4.6 i.e. significantly positive for age but negative for tenure in quoted firms and age2 in both periods.

4.7. Chapter Summary

NEDs play a vital role in corporate governance, but some are valued more than others in the market for directorships leading to multiple board seats. However, little is known about the collective nature and determinants of NEDs' board seats, particularly following the global financial crisis. This chapter explores whether number of board seats held by NEDs in the UK financial sector is associated with the performance of the BOFIs that they are affiliated to and(or) their reputational capital, assessed based on their educational qualifications, social networks, and governance experience, while controlling for other personal and firm characteristics. Using ordered logit regressions, results indicate that only reputational capital variables were significantly associated with board seats in the pre-financial crisis period. However, in the post-financial crisis period, market performance of BOFIs where the NEDs serve as well as all three reputational capital variables, were significantly associated with board seats. The results suggest that, post-crisis, BOFIs may have held NEDs more responsible for their firms' performance, and responded to the call in the Walker Review and the UK Code to provide more weight on skills, experience, and diversity when appointing NEDs in the financial sector.

Chapter 5

Internal Market for Directors: NEDs' Turnover

5.1. Introduction

This chapter presents the third empirical study to explore the efficiency of the UK directors' employment market in creating incentives for NEDs to behave in the market players' interests (e.g. shareholders). Specifically, the aim of this chapter is to answer one of the main research questions of this thesis - to what extent NEDs' probability of turnover is associated with NEDs' firm performance and their reputational capital.[76] This chapter also addresses if the internal employment market has been affected as incentives mechanism following changes in the UK regulatory environment after the financial crisis.

The remainder of the chapter is structured as follows. The next section provides an overview of the chapter, highlighting its importance and objectives. Section three addresses the research questions of this part of the study. Section four

[76]NED's 'reputational capital' is a measure of director individual skills, knowledge, and qualifications. Therefore, this measure is conceptually related to the board's 'competitive capital' introduced on Chapter 3 which is an aggregate measure of the reputational capital of all directors sitting on that board. On other words, this thesis uses the terms 'competitive' and 'reputational' capital to distinguish between the unit of interest. The former term is used with boards reflecting the competitive advantage that a firm achieves by having an overall competitive board, while the latter term is used with NEDs reflecting their attractiveness in the employment market.

presents the study's institutional background, related literature, and hypotheses development. This is followed by the research design in section five. Finally, results of the findings and the chapter summary are discussed in sections six and seven, respectively.

5.2. Chapter Overview

NEDs play a crucial role in ensuring corporate accountability especially in Anglo-Saxon countries. NEDs have been described as a "decision-making group that faces complex tasks pertaining to strategic-issue processing" (Forbes and Milliken, 1999). To successfully deal with these challenging tasks, NEDs need to be equipped with a range of skills, knowledge, and experience (i.e. reputational capital). The need for such reputational capital is even greater in regulated sectors where NEDs' tasks are more demanding (Minichilli et al., 2009). Indeed, corporate failure due to directors' genuine incompetence are as common as – or maybe even more than – the ones resulting from directors' self-seeking behaviour (Hendry, 2005). Therefore, having a good mix of directors' reputational capital on the firm's board is deemed to be an important prerequisite for its effectiveness (Roberts et al., 2005; Zattoni and Cuomo, 2010).

As far as regulations are concerned, a review of the corporate governance codes developed worldwide, before the global financial crisis, shows that competencies of individual NEDs are not considered a governance issue to be regulated in detail and is usually left for the market forces to regulate (Zattoni and Cuomo, 2010). In the UK, the Combined Code on Corporate Governance (FRC, 2003, 2008) emphasises on the board overall balance of skills and qualifications, rather than merely determining the specific competencies individual NEDs should have. Specifically, among the UK Combined Code's main recommendations is the one discussing the boards' balance of skills and experience, and independence (see § A.3 of the Code).[77] In addition, NEDs' replacements are suggested to be made in

[77] For instance, one of the provisions in the UK Combined Code on Corporate Governance (FRC, 2003, 2008) suggests that firms' boards should be of "sufficient size that the balance of skills and experience is appropriate for the requirements of the business".

a way that will "maintain an appropriate balance of skills and experience within the company and on the board" (see § A.4 of the Code). Hence, the probability of a NED's turnover in the UK is expected to be related to his/her reputational capital relative to the board.

Furthermore, management and accounting literature indicate that, for independent NEDs to be effective, these aforementioned NEDs' functional competencies need to be complemented with firm-specific knowledge (Rechner, 1999; Smallman, 2005; Zattoni and Cuomo, 2010). The latter knowledge is essential for overcoming the problems that could arise from information asymmetry between management and independent NEDs (Duchin, Matsusaka, and Ozbas, 2010; Linck et al., 2008). However, gaining firm-specific knowledge demands independent NEDs to invest a considerable amount of time and effort (Brickley and Zimmerman, 2010; Hillman and Dalziel, 2003; Shen, 2005). Therefore, one line of prior research suggests that directors with multiple directorships (i.e. busy NEDs) might be less effective as they are overburdened with too many other board responsibilities (Ferris et al., 2003). This will cause them to spend less time on their firm's boards, know less about their firms, and fail to challenge the firm's management. For the same reasons, policymakers and shareholders' associations are also inclined to limit the number of external board seats a director can have.[78] However, other research calls for limiting the overall number of busy NEDs on the firm board instead of limiting the number of external board seats that a NED is allowed to have. That is, the negative consequences of having busy NED on the board are contingent on how busy his/her board is (i.e. board busyness). In other words, distinction should be made between individual NED busyness and board busyness. Based on the above arguments, it is hypothesized that the turnover probability of busy NEDs increases if they are sitting on a busy board, as their shareholders may be less inclined to re-elect them.

[78] As mentioned in Chapter 2, the Combined Code on Corporate Governance (FRC, 2008) states that the boards of UK firms "should not agree to a full-time executive director taking on more than one non-executive directorship in a FTSE 100 company nor the chairmanship of such a company (A.4.5)". Similarly, in the US, the Council of institutional investors suggests that directors "with a full-time job should sit on no more than two other boards".

Unfortunately, compared to CEOs, research on NEDs' turnover is relatively limited and lacked a systematic examination of NEDs' reputational capital and busyness relative to their board. Instead, they tend to focus on turnover sensitivity to firm financial performance, especially following irregular events (e.g. takeover, provision of new laws, financial distress, fraud) (see, Bugeja et al., 2009; Coles and Hoi, 2003). This study sheds light into this important issue by examining NEDs' turnover sensitivity not just to their firm financial performance but also to their reputational capital and busyness individually, and relative to their boards. In addition, since most firms do not face extraordinary circumstances, this research extends the relatively few studies that examined the NEDs' turnover-performance association under general circumstances (e.g. Yermack, 2004).

Furthermore, to the best knowledge of the researcher, no study has considered the impact of the financial crisis on NEDs' turnover, particularly in the UK financial sector. As discussed later (see, section 5.4.6), the post-crisis regulations could have a considerable impact on the association between NEDs' turnover and their reputational capital, busyness, and firm performance. Given that the used data set spans the period between 1999- 2014, investigation was conducted for the full sample as well as the pre- and post- crisis periods to test whether NEDs' turnover in BOFIs has been affected by changes that occurred in the business and regulatory environments following the financial crisis. The study focused only on NEDs who are sitting on the boards of public-listed BOFIs and, for comparison purposes, the non-financial firms in the UK for the period 1999-2014. This provided 66,368 NED years observations.

5.3. Research Questions

As mentioned in Chapter 1, the general objective of this part of the study is to investigate to what extent NEDs' probability of turnover is associated with NEDs' firm performance and their reputational capital. Thus, it contributes to the literature on directors' turnover and incentives by investigating the following research questions:

Q6a. Is there a significant relationship between performance of firms affiliated to the NED and probability of NED's turnover?

Q6b. Is there a significant relationship between a NED's reputational capital relative to the board and probability of NED's turnover?

Q6c. Is there a significant relationship between a NED's commitment status (busyness) relative to the board and probability of NED's turnover?

Q6d. Is there a significant change in the relationship between NEDs' affiliated firms' performance, relative reputational capital, relative busyness, and the probability of NED's turnover in the post-crisis period?

5.4. Institutional Background, Literature Review and Hypotheses Development

5.4.1 Corporate Governance in the UK Financial Sector

A hallmark of the UK corporate governance codes is its 'comply or explain' approach which provides flexibility to the boards to deviate from a particular provision as long as they explain the reason (Conyon and Sadler, 2010). Hence, what the boards of the UK firms practice (de facto) could be different than what the regulators promote or expect them to do (de jure). However, the proponents of institutional theory and legitimacy theory argue that the majority of firms would be prone to adopt these "best practices" to avoid adverse attention from its shareholders (Bender, 2004).

Of particular interest for the purpose of this study are the recommendations of the Combined Code on Corporate Governance (FRC, 2008) concerning NEDs' tenure, evaluation, and removal. The UK Combined Code discusses the different stages of the NEDs' career path. Before the appointment of new NEDs, the nomination committee is required to rigorously review the current board diversity, experience and skills (see § B.2 of the Code) when drawing up a list of potential non-executive nominee(s), who is subject to election at the first AGM after the appointment date. Before the (re)election, shareholders must be provided with sufficient biographical details of NED nominees, along with a board statement for

their choice of candidate(s). NEDs should be appointed for specified terms and subject to statutory provisions relating to the removal of a director (see § B.2 of the Code). In addition, appointed NEDs are subject to re-election at intervals of no more than three years (one year for FTSE 350 firms) (see § B.7 of the Code).

Due to the need for progressive refreshing of the board, a NED should normally stay no longer than six years on the boardroom. The Combined Code suggests that the standing for the 'annual' re-election should be based on the performance evaluation of individual directors (see § B.7 of the Code). Hence, the annual evaluation of individual directors' performance is expected to be available to shareholders when a NED re-election proposal is being made by the board. In addition, internal performance evaluation of the board, as a unit, is encouraged to be carried out annually and the procedure to do so is expected to be disclosed in the firms' annual report (see § B.6 of the Code).

5.4.2 Literature Review and Hypotheses Development

Compared to executive directors, primarily CEOs, studies that examine NEDs' turnover are limited (Sharad and Steven, 2010) and are mostly in the US context. A study of NEDs' turnover based on the UK setting is important for several reasons, as mentioned in Chapter 1. First, the nature of the US's capital market is different from the UK's (Ben-Amar et al., 2013).[79] Second, most studies hardly consider highly regulated industries such as the financial sector and examining NEDs turnover in the BOFIs may deliver different findings as the boards' tasks (e.g. advice, strategic participation, and output control) in this industry are more demanding (Minichilli et al., 2009). In addition, since BOFIs' directors are trusted with the control of strategic resources for the economy, their re-election may attract more attention. Third, the recent financial crisis provides a natural setting to test if the market for NEDs in this sector has changed following the regulatory

[79]For instance, the US market is dominated by individual shareholders while in the UK by institutional investors. In addition, the UK financial reporting environment is different from the US as it adopts IFRS while the US follows the US GAAPs and its approach in enforcing corporate governance is quasi-voluntary and follows the 'comply or explain' approach while in the US it is regulated by the Sarbanes-Oxley Act (Tricker, 2009; Zaman et al., 2011).

and corporate governance reforms (e.g. Walker Review, 2009; the Code, 2010; Stewardship Code, 2010; Davis' Report, 2011 and SM&CR, 2012). Finally, most NEDs' turnover studies focused only on firm performance and failed to consider the effects of NEDs' reputational capital, social network and busyness on an individual basis as well as relative to their boards and their turnover. In this section, a review of prior literature on NEDs' turnover helps in developing the hypotheses for this study. Table 5.1 presents a summary of prior studies on NEDs' turnover.

5.4.3 NEDs' Turnover and Firm Performance

Prior literature suggests that if the directors' turnover – including NEDs – is significantly associated with the shareholders' perception of their 'on-the-job' performance, then turnover can be an efficient market mechanism that align their interests with the shareholders. As mentioned earlier, most studies that examined this hypothesis have focused on CEO's turnover-performance association (see, Dahya et al., 2002; Mikkelson and Partch, 1997), but similar research into NEDs' turnover-performance association received much less attention (Sharad and Steven, 2010).

Moreover, studies exploring NEDs' turnover-performance association tend to examine this association in the wake of different irregular events faced by firms (see Table 5.1, panel A) whereby NEDs' actions during these events are used to capture the shareholders' perceptions of the performance of NEDs. For instance, Coles and Hoi (2003) examined NEDs' turnover following NEDs' opt-out decision toward Pennsylvania Senate Bill where opt-out decision is used as a lens for spotting shareholders-friendly directors. They found little evidence of a relationship between opt-out decision and NEDs' chance of losing their board seat, yet prior industry median adjusted accounting performance was found to significantly affect the probability of NEDs' turnover.

Since most firms do not face extraordinary circumstances, it is imperative to examine NEDs' turnover-performance under the general circumstances (see Table 5.1, panel B). To the best of the researcher's knowledge, Yermack's study (2004) is the first to do so by examining NEDs' turnover as a function of firm performance at

Table 5.1
Summary of the Studies on NEDs' Turnover

Study	Dependent Variable	Directors' Reputational Capital Independent Variables	Other Independent and Control Variables	Sample	Main Results
			Panel A: Extraordinary Circumstances		
(Bugeja et al., 2009)	The removal of directors from their target board seat post-takeover.	• Pro-Shareholders actions during takeover events. • Number of external directorships.	• The target firm buy-hold abnormal return. Board independence. • Takeover-related control variables. • Whether the director is a Block-Holder.	• A sample of non-executive directors (N=537) who were serving on 135 Australian firms that experienced a takeover from 2000 to 2002. • Director level.	• NEDs engaged in hard bargaining does not increase the probability of director retention. • An increase in the number of external directorships reduces the likelihood of NEDs' removal. • Target firm performance is inversely related to turnover at 1% significance level.
(Fich & Shivdasani, 2007)	Board turnover measured, based on firms' year proxy, as percentage of outside directors who retained their board seat at the sued firm.	--------	--------	• A sample of outside directors of 113 firms facing shareholder class action lawsuits from 1998 to 2000. • Board level.	• Outside directors do not face abnormal turnover following financial lawsuit of the firm. • Outside directors experience a substantial decline in the number of other board appointments held.
(Srinivasan, 2005)	The directors' loss of board position in restating company.	• Severity of the restatement x audit committee membership. • Number of external directorships. • Financial expertise (0,1)	• Market adjusted stock performance. • Audit Committee membership. • CEO turnover. • Age and tenure. • Director's shareholding in the firm. • Firm size, board size, and independence.	• A sample of outside directors (N=2,016) serving on 409 companies that restated their earnings from 1997 to 2001. • Director level	• Turnover is associated with both being on the audit committee and severity of the restatement. • Number of external directorships is significantly and negatively associated with likelihood of NEDs' removal. • Firm performance is inversely related to NEDs' turnover at 5% level.

Table 5.1 ***(Continued)***
Summary of the Studies on NEDs' Turnover

(Coles & Hoi, 2003)	The retention of director to their board seat post-SB1310 provisions opt out decision.	• Current senior position (Chairman, CEO, President). • Large firm Experience (served on Fortune1000 firms). • Number of external directorships.	• Industry adjusted annual accounting performance. • Retire (dummy for age between 65 -69). • Director independence. • Firm size. • Research intensity.	• A sample of non-executive directors (N=579) serving on Pennsylvanian firms, US. • Director level.	• Holding a Fortune 1000 board seat increases the likelihood of director retention. • Prior industry-median-adjusted accounting performance is inversely related to NEDs' turnover.
(Agrawal, Jaffe, & Karpoff, 1999)	Univariate comparison of board turnover. Board turnover measured, based on firms' year proxy, as the change in the number of board members.	--------	--------	• A sample of US listed firms (N=103) that was involved in a fraud during 1981-1992 (the fraud sample). A sample of matched controlled firms (N=103). • Board level.	• The revelation of fraud is associated with unusual amount of turnover only among insider directors but not among the outside directors.
(Gilson, 1990)	Univariate comparison of board turnover. Board turnover measured as the change in the number of board members for two years after the revelation of distress.	• Director experience in the firm (years of service). • Professional affiliation of directors (Manager in another non-financial firm, Manager in unaffiliated bank or insurance company, Investment banker, Lawyer, Professor).	• Director's Age. • Director's Ownership.	• A sample consisting of US-listed firms (N=111) that either filed for bankruptcy or restructured their debt to avoid bankruptcy during 1979-1985. • Board level.	• Turnover of directors during financial distress is higher in relation to normal turnover. • The board is made up of more outside directors with special interest or expertise in monitoring financially distressed firms. • Departing directors are relatively more experienced and older.
			Panel B: General Circumstances		
(Davidoff et al., 2014)	The director turnover, equal to one if		• Stock return-net of market. • Years of service. • Director's Age.	• A sample of outside directors (N= 4,856	A statistically significant correlation at the 5% level between directors' turnover and stock returns net of

Table 5.1 ***(Continued)***
Summary of the Studies on NEDs' Turnover

(Davidoff et al., 2014) (Continued)	a director does not appear in the next year's proxy.	--------	• Director's Ownership. • Gender. • Audit, and Remuneration Committees' membership. • CEO, who appointed the director, departure year. • Firm Size	director year observations) on the boards of US financial firms (2006-2010). In addition, sample of outside directors on the boards of US S&P1500 non-financial firms from 2006 to 2010. • Director level.	of market in the immediate prior year as well as the prior two year, and. • Findings for non-financial firms' sample mirror those for financial firms.
(Sharad & Steven, 2010)	The director turnover, equal to one if a director does not appear in the next year's proxy.	• Number of external directorships.	• Industry- adjusted market return. • Years of service. • Director's Age. • Gender. • Poor director attendance. • Director remuneration. • CEO turnover. • Firms size, and control for industry.	• A sample of outside directors (N= 33,191 director year observations) on the boards of 1,065 US non-financial firms from 1997 to 2004.	• Based on portfolio analysis, the firms with the lower performance experience higher turnover. • Turnover is inversely related to the number of directorships, tenure, and remuneration. • A statistically significant correlation between firm performance and turnover, at the 5% level.
(Fischer et al., 2009)	Board turnover measured as the change in the number of board members divided by the number of board seats up for election.	• Board approval by shareholders, the median ratio of "for" votes to total votes cast across board members standing for election within a rm-year.	• Industry adjusted stock return (lagged one, and two years). • Industry adjusted ROA (lagged one, and two years). • Change in the percentage of shares held by institutions. • Director's Age.	• A sample of S&P 500 firms (N=1497 firm-year Observations.) over 2000 to 2004. • Board level.	• Shareholders' higher (lower) board approval is associated with lower (higher) board turnover in the following year.
(Yermack, 2004)	The director turnover, equal to one if a director does not appear in the next year's proxy.	--------	• Stock return-net of market. • Years of service. • Director's Age. • Director's Ownership. • Director independence. • Gender. • Audit, and Remuneration Committees' membership. • CEO departure year.	• A sample of outside directors (N=734) on the boards of Fortune 500 firms, excluding financial firms, from 1994 to 1999. • Director level.	• A statistically significant correlation between firm performance and turnover, at the 1% level. • The performance–turnover relation operates three to four times more strongly for CEOs than for outside directors.

which the NED served. He found a negative and statistically significant association between a NED's turnover and firm performance in the departure year.

Similarly, this study examines the association between NEDs' turnover probability and the financial performance of their affiliated BOFIs. Corporate failure of firms affiliated to the NEDs may cause regulators to presume all board members, including NEDs, guilty of negligence while shareholders and depositors may lose confidence in the credibility of the NEDs, resulting in the possible loss of their board seats. On the other hand, good performance by firms affiliated to the NEDs may signal that they have successfully exercised proper checks and balances in ensuring that management have not taken excessive risk or embark on strategies that may be detrimental to shareholders and depositors, hence, increase their chance to be re-elected. Therefore, the first hypothesis, using both accounting and market-based measures of performance of the BOFIs that the NED is affiliated to, is stated as follows:

> *H1: There is a significant negative association between the performance of the BOFI at which the NED serves as a board member and the NED's turnover probability.*

5.4.4 NEDs' Turnover and Board Balance of Competitive Capital

As discussed earlier, the UK corporate governance codes highlight NEDs' reputational capital as one of the important criteria in the appointment and retention of board seat. Drawing upon the board composition literature, three different forms of NEDs' reputational capital have been suggested as highly valued by firms: educational qualifications, social network and, governance experience. NEDs' educational backgrounds, even if unrelated to the firm's industry, are valued in their own right as they provide directors with different perspectives that would enrich the discussion in the boardroom (Acharya and Pollock, 2012; Anderson et al., 2011). In addition, specific educational qualifications such as risk management and financial expertise can be a requirement for sitting on certain board committees. Moreover, NEDs' educational backgrounds may influence their social status, professional paths and networking (Useem and Karabel, 1986).

Second, the literature also highlights the role that network and social connections play in directors' employment market (Anderson et al., 2011; Harford, 2003; Wilson et al., 2013). Networking is valuable as connections with peer companies enable a firm to gain access to important information especially when a firm is planning strategic alliances, mergers or acquisitions, or is expanding into new markets (Mazzola et al., 2014; Renneboog and Zhao, 2011). Furthermore, directors who developed themselves into reputable figures in the society often have access to politicians, government, employers' organizations, regulators and other professional networks.[80]

Finally, board level experience is one of the valuable resources that firms look for when hiring NEDs. Governance experience has been measured in different ways in the literature. For instance, Coles and Hoi (2003) and Anderson et al., (2011) assessed governance experience based on the number of board seats a director hold on other firms. Serving on other boards is beneficial for firms as it equips directors with valuable experience which eventually leads to superior advice and monitoring (Baran and Forst, 2015).

In addition, more specific governance experience such as experience of working on boards of listed, large and multinational firms, and the experience of leading firms' board are also valued. Indeed, the Higgs' Report (2003) highlighted how "previous PLC governance experience is often seen to be the main, and sometimes only, competence demanded of potential candidates [p.42]". Walker Review also suggests that having NEDs with "high-level experience in other major business" helps in creating an effective board's environment (Walker, 2009). Coles and Hoi (2003) capture such governance experience using directors' membership in the top 100 firms on the stock market. They proposed that given the complexity of the business operations, NEDs serving on such boards may have gained valuable

[80]The role of directors' network has been discussed differently in the literature. On one hand, director network can be a proxy for 'cosy club', whereby network is seen as contributing to agency problem and perceived as negative. On the other hand, proponents of resource dependence theory perceive directors' network to be a valuable resource that would benefit firms through access to information, politicians, and regulators. Most studies do not distinguish between these two views of network except for Renneboog and Zhao (2011, 2014) who examined if CEO's network are built for gathering information or for managerial dominance.

experience in carrying out their roles and thus became an important asset to their firms.

In short, NED's reputational capital is an important consideration in the NEDs' appointment and retention decisions by the firm's board and shareholders. Thus, the second hypothesis, based on individual NED's reputational capital, is stated as follows:

> *H2a: There is a significant negative association between an individual NED's reputational capital, as captured by the NED's educational qualifications, social network, and board level experience, and the NED's turnover probability.*

Besides the general calls for NEDs who are individually equipped with the necessary qualification, the Combined Code (FRC, 2008), the Code (FRC, 2010a), and the Walker Review (Walker, 2009) have all emphasised on considering the board 'overall balance' of skills and qualification throughout the different stages of NEDs' career (i.e. appointment, and re-election). Consequently, while the individual NEDs' various competencies may be deemed attractive to the general employment market in their own right, it may be less so if such competencies are already sufficiently reflected in the board or do not add value to the competencies of the firms' board. Hence, the following hypothesis addresses the impact of the relative importance of NED's various reputational capital to the board and the NED's turnover:

> *H2b: There is a significant negative association between an individual NED's various reputational capital relative to the board's capital, and the NED's turnover probability.*

5.4.5 NEDs' Turnover and Board Busyness

The relationship between NEDs' multiple directorships and the board's effectiveness is a contentious issue. On one hand, several studies indicate a negative

relationship between the probability of directors' turnover and the number of external board seats held by the NEDs (Bugeja et al., 2009; Coles and Hoi, 2003). It is proposed that NEDs with multiple directorships draw on their network in a way that benefit the firm (Johansen and Pettersson, 2013), and will not shirk their responsibilities or harm their firms' performance (Ferris et al., 2003). The results is consistent with the notion of 'selection effects' that talented NEDs are more busy (Falato et al., 2014).

On the contrary, another line of studies argues that directors with multiple directorships might be overburdened with board responsibilities that could jeopardise their independence and ability to effectively monitor the management which may consequently decrease shareholder value (Falato et al., 2014). For instance, Devos, Prevost, and Puthenpurackal (2009) found shareholders reacting negatively to appointments of interlocked directors as this can weaken governance. Consequently, those NEDs who are sitting on multiple boards may face higher turnover.

In summary, although a high number of board seats could cause a director to have less time to devote to the firm, the absence of other board appointments could suggest director's lack of experience. Consequently, although anticipating the direction of the association between NEDs' multiple directorships and turnover is as difficult as fully disentangling the potential benefit of having those 'talented' NEDs on board from its cost (Adams, Hermalin, and Weisbach, 2010), we suggest the next hypothesis as follows;

> *H3a: There is a significant positive association between an individual NED's busyness and the NED's turnover probability.*

One possible explanation for the inconclusive results of studies on directors' busyness is that the negative consequences of NEDs' busyness are not necessarily triggered by the presence of one busy NED on the board but rather when most of the directors on that board are busy (i.e. board busyness). Several studies documented how board busyness can be detrimental to shareholders' value and firm performance (Fich and Shivdasani, 2006; Kaczmarek et al., 2014). Hence, it

is further hypothesised that busy NEDs are more likely to lose their board seats if their board is deemed busy.

> *H3b: There is a significant positive association between the individual NED's busyness relative to the board busyness, and the NED's turnover probability.*

5.4.6 NEDs' Turnover in BOFIs and the Financial Crisis

The financial crisis has to a certain extent been attributed to the failure of check and balance mechanisms by the boards along with the incompetence and/or naivety of NEDs in allowing excessive risk-taking by management (Cornett et al., 2009). Hence, regulators have responded by bolstering the corporate governance codes related to the processes and functions of board members including those specifically addressed to the NEDs. Indeed, post-crisis, the UK market witnessed the launch of several reforms that address corporate governance issues for all public listed firms (e.g. the Combined Code (FRC, 2010a) and the Stewardship Code (FRC, 2010b)) and specifically for BOFIs (e.g. the Walker Review (Walker, 2009) and the Senior Management Regime (Parliamentary Commission on Banking Standards, 2013)).

A considerable number of studies have examined corporate governance issues pre- and post- the financial crisis to observe how the markets have changed and anticipate how successful the regulators' endeavours might be in preventing future crises (Aebi et al., 2012; Erkens et al., 2012; Gupta et al., 2013). However, such studies of the BOFIs sector are mostly centred around the remuneration and independence issues (Cornett et al., 2009; Minton et al., 2011) and their effect on firm performance. Little is known on the implications of the financial crisis on NEDs' turnover in the UK's BOFIs and examining this effect will contribute to the literature in this area. One of the main governance issues that post-crisis codes emphasised was the importance of NEDs' qualifications and skills (Walker,

2009; Dodd-Frank-Act, 2010).[81] NEDs' qualities, experience and abilities – including having an independent mind and getting the right mix of financial industry capability and critical perspectives from high-level experience in other major businesses – were among the Walker Review's (2009) thirty-nine recommendations for the BOFIs.[82] Hence, this study hypothesises the following:

> *H4a: The association between the NED's competences relative to the board, and the NED's turnover probability is more significant negative in the post- financial crisis period.*

Furthermore, there was increasing regulatory calls to tackle the issue of board busyness. Specifically, the Walker Review recommends that "the overall time commitment of NEDs as a group on a FTSE 100-listed bank or life assurance company board should be greater than has been normal in the past". Therefore, this study hypothesises the following for board busyness:

> *H4b: The association between the NED's busyness relative to the board busyness, and the NED's turnover probability is significantly positive in the post- financial crisis period*

Finally, following the crisis, more attention is given by concerned shareholders and the media on who gets appointed on the boards of BOFIs. Also, the FRC launched its first Stewardship Code (FRC, 2010b) for institutional investors, which aims to promote better stewardship of investee firms and to "enhance value and accountability to the ultimate beneficiaries".[83] Given the launch of these reforms in corporate governance and regulations, popular press pressure, and the increased monitoring by shareholders following the crisis, which ultimately increase NEDs'

[81] In the US, the Dodd-Frank-Act (2010) requires directors to have "... a bachelor's degree or higher from an accredited college or university in risk management, business administration, finance, economics,...to demonstrate minimum competence in risk management [p.415]".

[82] Furthermore, Walker Review encourages regulators (i.e. FSA) to "...give closer attention to the overall balance of the board in relation to the risk strategy of the business, taking into account the experience, behavioural and other qualities of individual directors and their access to fully adequate induction and development programmes" (Walker, 2009)

[83] For instance, the first principle of the Stewardship Code encourages institutional investors to exercise proxy voting.

accountability, it is imperative to examine if that has reflected on NEDs' turnover sensitivity to firm performance. So, this study hypothesises the following:

> *H4c: The association between the accounting and market performance of firm and the NED's probability of turnover is significantly negative for the post- financial crisis period.*

5.5. Research Design

5.5.1 Sample and Data Collection

The sample includes all NEDs sitting on the boards of all the public firms listed on the London stock exchange over the period 1999–2014. Spanning over a period of 15 years, the data allows studying not only what influence NEDs' turnover in general but also the extent to which the market has changed after the global finical crisis. Hence, the models are tested separately for NEDs who are sitting on the BOFIs and non-financial firms' boards, and over the pre-and post-the global financial crisis periods (2008).

The construction of the dataset starts by identifying all the public listed firms on LSE over the sample period and grouping them into BOFIs and non-financial firms based on the UK standard industrial classification of economic activities (2008). The BOFIs in the sample fall under section K of SIC (Financial and insurance activities) which comprise banks, insurance, investment, life assurance and other financial firms. Then, using the BoardEx database and firms' annual reports, the director years for those firms, along with the directors' reputational capital data and other director-characteristics were collected.

Firstly, firms that have less than two successive years of directors' data were dropped because the dependent variable, NED's turnover, requires at least two years of directors' data in a row. Secondly, using firms' ticker codes, director years

were matched with the financial data of their firms downloaded from the DataStream database.[84] The matched data includes accounting and stock performance information as well as other financial related control variables (i.e. leverage ratio, total assets, market value, and interest on debt).

Overall, 36,447 NED years observations were dropped either due to missing firms' tickers, missing financial data, and/or missing directors' data, ending with a total of 17,744 firm years and 66,368 NED years. Of those observations, 3,272 and 14,762 of firm years and NED years, respectively belongs to BOFIs. Table 5.2 presents a summary of the operationalisation of the variables used in this study.

5.5.2 Model Specification and Variable Construction

The developed hypotheses were tested using a model that comprised a vector of variables related to NEDs' reputational capital, busyness, and their firm performance as the main independent variables of interest while controlling for other variables. The model, estimated using logit, is as follows:

$$NEDs' \ Turnover \ _{i,t} = \alpha_0 + \beta_1 \ NEDs' \ affiliated \ Firm \ average \ performance \ measures \ _{i,t,t-1} + \beta_2 \ NEDs' \ Reputational \ Capital \ _{i,t} + \beta_3 \ NEDs' \ Busyness \ _{i,t} + Control \ Variables \ _{i,t} + \epsilon_{i,t} \tag{5.1}$$

The study is interested in β_1, β_2, and β_3 which allows for the testing of the first, second, and third hypotheses, respectively. NED's reputational capital comprised of educational background, social networks, and board level experience. NED's busyness is based on the number of board seats the NED has in a given year. The NED's affiliated firm's financial performance is gauged by either accounting or market measures. The model includes other personal control variables such as NED's tenure, age, gender, independence, and memberships in audit, remuneration

[84] The sample period is from 1999-2014. However, stock market and accounting data, downloaded from Datastream, were from 1996-2014 due to the inclusion of lagged variables. Firms' annual reports were used to complete the dataset when data is unavailable from the database.

Table 5.2
Operationalisation of the Variables

Variable	Description	Source
Dependent		
NEDs Turnover	A binary variable that equals to one for a given year's observation if the NED is on the firm's board in that year, but does not appear on the board in the following year.	Annual Reports, BoardEx
Independent: Director's Reputational capital & Busyness:		
Educational qualifications	NED's total number of professional and academic qualifications in year (t). *NED's educational qualifications relative to the board* is measured by dividing individual NED's educational qualifications by his/her own board accumulative number of educational qualifications.	BoardEx
Social networks	NED's total number of connections with other directors, whether past or present via their directorships. These links are captured through detecting a date overlap of directors sitting on boards, whether quoted, private, not for profit, or other. This is the method used by BoardEx in identifying number of social networks. *NED's Network relative to the board* is measured the same way as the previous variable.	BoardEx
Chairmanship Experience	A dummy variable that equals to 1 if the NED has had a chairmanship or vice-chairmanship experience in any listed firms in year (t), 0 otherwise. *NED's Chairmanship Experience relative to the board* is measured the same way as the previous variable.	BoardEx, Annual Reports
NEDs' Number of Board Seats (Individual's Busyness)	The total number of board seats held by NEDs in quoted firms on the report date selected. *Individual's Busyness*×*Board's Busy* is interactive variable of NEDs' Number of Board Seats and busy board (a dummy variable equals one if the majority of NEDs sitting on the board are busy).	Annual Reports, BoardEx
Independent: Performance of BOFI(s) affiliated to the NEDs		
Market adjusted stock return	The BOFI's annual stock return, net of the FTSE All Shares index.	Datastream
ROE	The BOFI's annual return on equity.	Datastream
Control: NEDs' other characteristics		
Audit committee membership	A dummy variable that equals to 1 if the NED is in the audit committee, 0 otherwise.	BoardEx
Remuneration committee membership	A dummy variable that equals to 1 if the NED is in the remuneration committee, 0 otherwise.	BoardEx
Nomination committee membership	A dummy variable that equals to 1 if the NED is in the nomination committee, 0 otherwise.	BoardEx
Tenure	The number of years spent by the NED in the focal financial firm.	BoardEx, Annual reports
Age & Age^2	NED's age in a particular year (t) and NED's age in a particular year squared.	BoardEx, Annual reports
Female NED (Gender)	A dummy variable that equals to 1 if the NED is a female, 0 otherwise.	BoardEx
Independence	A dummy variable that equals to 1 if the NED is reported as independent in the firm's annual report in a given year, 0 otherwise.	BoardEx, Annual reports
Control: BOFIs' characteristics		
Firm Size (ln TA).	Natural log of total assets.	Datastream
Sub-Sectors	Dummy variables to control for sub-sectors in the sample.	BoardEx
Year	Year indicator variable.	

and nominations committees, as well as firm-specific control variables such as firm size, sectors, sub-sectors of the BOFIs and time.

5.5.2.1 Dependent Variable: NEDs' Turnover

To determine NEDs turnover, the names of NEDs in the sample are compared each year over the entire 1999-2014 period. Then, consistent with prior literature (Davidoff et al., 2014; Fischer et al., 2009; Sharad and Steven, 2010; Yermack, 2004), turnover is measured as a binary variable that equals to one for a given year's observation if the NED is on the firm's board in that year, but does not appear on the board in the following year. NEDs who lost their seats because their firms are delisted either due to acquisitions or bankruptcies, are not counted as a 'turnover', since settling-up by shareholders for such directors cannot be observed (Davidoff et al., 2014). In such cases, the turnover variable is treated as a missing data for the year of delisting. Also, the turnover variable equals to zero for NEDs whose status changes from outsiders to insiders during the sample period (Yermack, 2004).

5.5.2.2 Independent Variable: NEDs' Reputational Capital

Three aspects were focused upon in capturing NEDs' reputational capital viz. educational qualifications, social networking, and board level experience as they reflect important reputational capital that firm's board and shareholders may consider when appointing or retaining NEDs. With regards to educational qualifications, several studies treat it as a continuous variable where the NED's highest level of education is coded as PhD, masters, bachelors or other (Zhu et al., 2014) while other studies measure educational background based not only on the depth but also the breadth. For instance, Anderson et al. (2011) examines the types of degrees that a director has. This study considers NEDs' educational qualifications

based on the number of professional and academic (e.g. undergraduate level and above) qualifications they possess.[85]

Social networks are established through educational ties (Cohen et al., 2010), club memberships, and working activities (Kuhnen, 2009). Given the arduous task in identifying social networks and connections that a NED possesses, researchers have used different proxies to capture this aspect. For instance, drawing on directors' employment history, Renneboog and Zhao (2011) used direct and indirect centrality measures to capture directors' networks. Another measure uses proximity of the NED to the firm's headquarters based on the assumption that directors who live closer to the firm have a greater ability to monitor and exchange information, as well as to develop long-lasting relationships compared to distant directors (Wilson et al., 2013). In this study, directors' networks were collected from BoardEx database based on the time directors have spent together in the same firm.

Board level experience has been captured in different ways in prior studies. Several studies considered director's age as a proxy for experience (see e.g. Doucouliagos et al., 2007; Eminet and Guedri, 2010; Renneboog and Zhao, 2011; Wilson et al., 2013) but age is used in this study as a control variable rather than proxy for experience.[86] Instead, similar to Anderson et al., (2011) and Coles and Hoi (2003), governance experience is measured as the number of external quoted board seats held by a NED in year (t). In addition, another dummy variable was included to capture board's leadership experience, specifically if NED has previously worked as chairman on other listed firms.

[85] Given the large dataset and reliance on BoardEx for information, we are not able to identify more specific industry qualifications such as banking, risk management, economics, etc. This is only possible if data is collected manually.

[86] Although age may capture a NED's general experience, it may not be a good proxy for the different types and levels of experience, which are valued differently in the directors' employment market. However, several meta-analyses indicate little or no association between age and directors' performance (see Ng and Feldman, 2008; Rhodes, 2004). Indeed, Several researchers (see e.g. Coles and Hoi, 2003; Davidoff et al., 2013; Yermack, 2004) use age as a control variable or to differentiate between disciplinary turnover and retirement (Fischer et al., 2009).

5.5.2.3 Independent Variable: Busy NEDs and Board busyness

As mentioned earlier, operationalising NEDs' busyness, as a potentially negative incidence, is a challenging task due to the difficulty of finding a proxy that captures directors' busyness without reflecting those directors' attractiveness and talents as well. Although the number of board seats a director holds has been used as proxy for busy directors, there is no clear directorship threshold that has been established in the literature. For instance, previous studies use the total number of external board seats (Sharad and Steven, 2010), a dummy equals to one if the NED hold three board seats or more (Ferris et al., 2003; Harford and Schonlau, 2013), and a dummy equals to one if the NED hold four board seats or more (Harris and Shimizu, 2004). Since all these measures are highly correlated, only the first measure is reported. As robustness check, a separate model is used for the other two measures of directors' busyness as well (i.e. dummy variables for busy NEDs using three and four seats threshold).[87] To examine if the association between directors' board seats and turnover might be moderated by their board's busyness; the interactive term (i.e. Individual's Busyness × Board's Busyness) was regressed on the dependent variable, director's turnover.

With regard to board's busyness, the literature uses two different proxies. The first one classifies a board as busy if the average number of external board seats held by all the NEDs sitting on that firms' board is equal to or more than three directorships (Ferris et al., 2003). The second measurement classifies a board as busy if the majority of the NEDs on that board are busy (i.e. holding three or more directorship). This study uses the latter measurement to control for board busyness as it is suggested to be more accurate (Fich and Shivdasani, 2006).[88]

[87] One possible explanation for the divergent results in prior studies is the possibility of non-linear relationship (Baran and Forst, 2015). However, the empirical analysis shows no existence of such curvilinear relationship between number of directorships and turnover.

[88] The wide dispersion in the number of NEDs' directorships renders the average measurement of directorships noisy. Therefore, similar to Fich and Shivdasani (2006), boards were classified as busy if the majority of their NEDs hold three or more board seats.

5.5.2.4 Independent Variable: Measures of Financial Performance

Market-based measures are usually used in related studies as they reflect firms' performance from the shareholders' perspective and are deemed more future-oriented (Kennedy and Limmack, 1996). The most common market-based measure used is the firm's annual stock return adjusted for either market (Yermack, 2004), industry (Fischer et al., 2009; Mikkelson and Partch, 1997) or size (Dahya et al., 2002; Mikkelson and Partch, 1997). However, the use of market-based measures has been criticised for possible contamination by noise in equity markets (e.g. Fischer et al., 2009). Hence, others use accounting-based measure as it is relatively an accurate reflection of firms' performance. Among the accounting measures used include return on assets (Doucouliagos, Haman, and Askary, 2007; Renneboog and Zhao, 2011) and its variations such as industry-adjusted ROA (Fischer et al., 2009; Harford and Schonlau, 2013) and average ROA (Dahya et al., 2002; Eminet and Guedri, 2010), operating margin (Mikkelson and Partch, 1997; Ferris, et al., 2003), sales growth (Colpan and Yoshikawa, 2012), return on equity (Colpan and Yoshikawa, 2012; Doucouliagos et al., 2007) and earnings per share (Doucouliagos et al., 2007). In this study, return on equity (ROE) and market adjusted annual stock return were used as proxies for accounting and market measures, respectively.[89]

To account for the possibility of time lag between firm performance and its consequences on NEDs' career prospects (i.e. turnover), it is imperative to use lags in examining this association. Indeed, a considerable number of studies included this variable up to lagged four years in their models. Since the UK Combined Code on Corporate Governance (FRC, 2003, 2008) suggests that NEDs should be subject for re-election either annually (for FTSE350) or every three years (for other firms), the average performance of two years (t, and t-1) is used for the purpose of this study.

[89]Regarding accounting measures, this study also uses ROA and EPS and the results still hold.

5.5.2.5 Control Variables

The control variables include NEDs' other personal characteristics, namely, age, gender, tenure and independence (Renneboog and Zhao, 2011; Yermack, 2004).[90] In addition, the model also controls for NED's membership of the board three committees: audit, remuneration and nomination. Control for firms' characteristics includes firm size (Harford and Schonlau, 2013; Mikkelson and Partch, 1997; Renneboog and Zhao, 2011), BOFIs' sub-sectors, and non-financial firms' sectors. Year-dummies were included to capture the unobserved factors related to that year.

5.6. Data Analysis and Findings

5.6.1 Descriptive Statistics

Table 5.3 presents descriptive statistics for the characteristics of NEDs' serving on the UK's BOFIs' between 1999-2014 and comparing them to other NEDs in non-financial firms in the sample. Consistent with the increasing criticism to the busyness of NEDs, the mean number of board seats held by a NED in BOFIs is two seats and in extreme situations five seats. The data further shows that NEDs in BOFIs hold relatively more external board seats (mean of 2.03) compared to NEDs in non-financial firms (mean of 1.8). This is consistent with bank control theory which suggests that directors on BOFIs are sought on the directors' employment market for easy capital access, and thus they are busier.

[90] Prior work suggests that the appointment of female directors to the board is not random. In addition, there is regulatory pressure to appoint more female directors. Hence, their possibility of turnover could vary from their male counterparts.
Director's board tenure is also used differently in the literature. On the one hand, director's tenure is used as a control variable to count for turnover caused by firms' policies on tenure in position (Sharad and Steven, 2010). On the other hand, it is used as proxy for board's and firm's level experience (Anderson et al., 2011; Yermack, 2004) and/or managerial entrenchment. In the first, tenure is expected to be positively associated with turnover, while it is expected to be negatively related to turnover in the later.

Table 5.3
Characteristics of NEDs on the UK's BOFIs Boards Vs. Non-Financial Boards (Directors Level)

Variables	BOFIs						Non-Financial Firms			
	Obs.	Mean	Std. Dev.	5th	50th	95th	Obs.	Mean	Compared BOFIs/Sig	
Current Number of Board Seats (quoted Firms)	11,179	2.03	1.51	1	1	5	39,924	1.81	Lower	***
Governance experience (# of years in quoted Firms)	10,994	3.67	4.33	0	2.7	11.7	39,278	2.95	Lower	***
Chairmanship Experience (quoted firms)	11,386	0.26	0.44	0	0	1	41,348	0.29	Higher	***
Educational Qualifications Resources	11,182	1.62	1.27	0	1	4	39,932	1.67	Higher	***
Social Networking Resources	11,386	559.19	736.78	13	265	2157	41,348	515.28	Lower	***
Audit Committee Membership	11,386	0.71	0.46	0	1	1	41,348	0.69	Lower	-
Remuneration Committee Membership	11,386	0.48	0.50	0	0	1	41,348	0.72	Higher	***
Nomination Committee Membership	11,386	0.60	0.49	0	1	1	41,348	0.51	Lower	***
Tenure in the board	11,182	5.93	5.47	0.3	4.5	16.2	39,932	4.93	Lower	***
Age	11,109	58.69	8.49	43	60	71	39,682	57.57	Lower	***
Independence (Independent director)	11,386	0.77	0.42	0	1	1	41,348	0.66	Lower	***
Gender (Female director)	11,182	0.09	0.29	0	0	1	39,932	0.08	Lower	***
Nationality (Non-British director)	10,023	0.16	0.37	0	0	1	36,313	0.20	Higher	***

‡ Level of significance for mean differences are ***:0.01, **:0.05, *:0.1.

In addition, as can be seen in Table 5.3, BOFIs' NEDs appear to be more experienced (3.67), socially connected (559), and independent (0.77), compared to their counterparts in non-financial firms. On the other hand, on average, they seem to have less chairmanship experiences (0.26) compared to NEDs in non-financial firms (0.29). One explanation is that BOFIs' NEDs are usually busier and hence less inclined to take on chairmanship positions.

Apart from the remuneration committees (48%), more than 60% of BOFIs' NEDs have held memberships in either audit and/or nomination committees, which is relatively higher than an average NED in non-financial firms. This can be attributed to their relatively better financial knowledge and connections that make them better candidates for those two board committees.

A typical NED in non-financial firms spent around five years on their firms' boards, compared to almost 6 years for BOFI's NEDs. Again, this may show firms' overall compliance with UK corporate governance codes requiring a NED not to stay longer than six years on the boardroom. Finally, the median age of NEDs in BOFIs is sixty as they normally take on non-executive positions in the later stages of their career.

Table 5.4 presents the correlation matrix for all variables. It shows a significant and negative relationship between turnover, the dependent variable, and performance of BOFI(s) affiliated to the NEDs based on both accounting and marketing measures. There is also a significant negative association between turnover and all of NEDs' reputational capital variables both individually and relative to the board. One exception is NED's chairmanship experience relative to the board which is negatively associated with turnover but not significant. Contrary to expectations, measurement of NEDs' busyness are negatively correlated to NEDs' turnover. Furthermore, the table shows a significant positive relationship between the dependent variable and both NED's age and his/her tenure in current firm. However, turnover is negatively correlated with different committees membership, gender, independence and firm size. There is no multicollinearity problem between the independent variables. Overall, the correlation matrix suggests that NEDs'

Table 5.4
Pearson Correlation Matrix of Chapter Five's Variables

	Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
1	Turnover	1.0000									
2	Educational Qualifications	-0.0118*	1.0000								
3	Network	-0.0327*	0.2905*	1.0000							
4	Chairmanship Experience	0.0095*	0.0390*	0.0399*	1						
5	No. of Board Seats	-0.0335*	0.1311*	0.1978*	0.2591*	1					
6	Individual's×Board's Busyness	-0.0152*	0.0984*	0.1242*	0.1467*	0.6589*	1				
7	Educ. Qual. relative to board	-0.0307*	0.5536*	0.0660*	0.0926*	0.0598*	0.0440*	1			
8	Network relative to board	-0.0515*	0.1531*	0.4980*	0.1046*	0.1459*	0.0784*	0.4104*	1		
9	Chairmans Exp. relative to board	-0.0086	-0.0033	-0.0254*	0.8534*	0.2061*	0.1070*	0.1455*	0.1394*	1	
10	Average ROE	-0.0301*	0.0102*	0.0320*	0.0002	0.0110*	0.0089*	-0.0301*	-0.0185*	-0.0106*	1
11	Average Stock Return	-0.0828*	0.0256*	0.0425*	-0.0248*	0.0278*	0.0183*	-0.0675*	-0.0551*	-0.0340*	0.1502*
12	Audit Comm. Membership	-0.0593*	-0.0180*	-0.0086*	-0.0599*	0.0135*	0.0129*	0.0754*	0.0905*	-0.0371*	-0.0042
13	Remuneration Comm. Membership	-0.0326*	-0.0065	-0.0007	0.0263*	-0.0043	-0.0033	0.0333*	0.0540*	0.0073	-0.0079
14	Nomination Comm. Membership	-0.0342*	0.0725*	0.1033*	0.0957*	0.0842*	0.0541*	-0.0569*	-0.0521*	0.0404*	0.0478*
15	Tenure in the firm's board	0.0801*	-0.0406*	-0.0873*	0.1271*	0.0068	-0.0038	-0.0081*	-0.0641*	0.1440*	0.0279*
16	Age	0.0477*	0.0231*	0.0053	0.1876*	0.0697*	0.0488*	-0.0318*	-0.0503*	0.1712*	0.0221*
17	Age^2	0.0558*	0.0176*	-0.0049	0.1815*	0.0576*	0.0410*	-0.0294*	-0.0545*	0.1676*	0.0206*
18	Female NED (Gender)	-0.0188*	0.0386*	0.1031*	-0.1360*	0.0014	-0.0009	-0.0430*	-0.0044	-0.1238*	0.0248*
19	Independence	-0.0674*	0.0719*	0.1535*	-0.0906*	0.0453*	0.0253*	-0.0693*	-0.0371*	-0.1068*	0.0446*
20	Firm Size (log TA)	-0.0055	0.1909*	0.3196*	-0.0599*	0.1237*	0.0970*	-0.2703*	-0.2180*	-0.1572*	0.1170*
		(11)	**(12)**	**(13)**	**(14)**	**(15)**	**(16)**	**(17)**	**(18)**	**(19)**	**(20)**
11	Average Stock Return	1									
12	Audit Comm. Membership	0.0083*	1								
13	Remuneration Comm. Membership	-0.0139*	0.4223*	1							
14	Nomination Comm. Membership	0.1019*	0.1694*	0.1958*	1						
15	Tenure in the firm's board	0.0842*	-0.0383*	-0.0451*	0.0664*	1					
16	Age	0.0509*	0.0464*	0.0656*	0.1359*	0.3179*	1				
17	Age^2	0.0454*	0.0364*	0.0579*	0.1228*	0.3301*	0.9943*	1			
18	Female NED (Gender)	0.0410*	-0.0031	-0.0133*	0.0516*	-0.0900*	-0.1615*	-0.1638*	1		
19	Independence	0.1115*	0.3016*	0.2025*	0.3192*	-0.0746*	0.1161*	0.0982*	0.1032*	1	
20	Firm Size (log TA)	0.2077*	-0.1109*	-0.1167*	0.2687*	0.0244*	0.1013*	0.0875*	0.1619*	0.3181*	1

turnover is significantly associated with their reputational capital, busyness and the performance of their affiliated BOFIs.

5.6.2 Do BOFIs' Performance, Reputational Capital, Busyness Affect NEDs' Turnover?

This section will cover the first three research questions (RQ6a, RQ6b and RQ6c) in this chapter. Specifically, it will answer these questions:

- Is there a significant relationship between performance of firms affiliated to the NED and probability of NED's turnover?
- Is there a significant relationship between a NED's reputational capital relative to the board and probability of NED's turnover?
- Is there a significant relationship between a NED's commitment status (busyness) relative to the board and probability of NED's turnover?

Table 5.5 presents the results for three sets of models. The regression in models 1 and 2 test for the hypotheses 1, 2a and 3a, with the independent variables being the individual NEDs' reputational capital, busyness, and their affiliated BOFI's financial performance and the dependent variable being NEDs' turnover. Models 3 and 4, on the other hand, consider the board balance of skills and qualifications i.e. NEDs' reputational capital variables relative to their boards' total competitive capital instead of the absolute measurement of NEDs' reputational capital to test hypothesis 2b. In addition, these two models also include an interactive variable to examine the effect of board's busyness on the association between busy NEDs and their turnover probability to test hypothesis 3b.

For comparison purposes, models 5 and 6 are replica of models 3 and 4 but based on NEDs sitting on the boards of the UK's plc non-financial sector. Each set of the models includes two sub-models where firms' average ROE (accounting) and firms' average stock return (market) are used alternatively as measures of performance.

Table 5.5
Logit Models for NEDs' Turnover in the UK PLCs Between 2000-2014

Variables	**BOFIs**				**Non-financial Sector**	
	General		**Relative**			
	Model (1)	*Model (2)*	*Model (3)*	*Model (4)*	*Model (5)*	*Model (6)*
Director's Reputational capital & Busyness:						
NED's Educational Qualifications	-0.019	-0.008				
	(0.028)	(0.027)				
NED's Network	-0.06	-0.057				
	(0.054)	(0.054)				
NED's Chairmanship Experience in Listed Firms	0.07	0.066				
	(0.081)	(0.08)				
NED's No. of Board Seats (Individual's Busyness)	-0.103***	-0.104***	-0.107***	-0.102***	-0.031*	-0.028
	(0.026)	(0.026)	(0.029)	(0.029)	(0.018)	(0.018)
Individual's Busyness × Board's Busyness			0.025	0.019	0.021	0.012
			(0.031)	(0.029)	(0.016)	(0.016)
NED's Educational Qual., relative to the board			-0.950***	-0.833***	-0.438**	-0.513***
			(0.322)	(0.314)	(0.181)	(0.168)
NED's Network, relative to the board			-0.720***	-0.753***	-0.653***	-0.740***
			(0.249)	(0.248)	(0.128)	(0.122)
NED's Chairmanship Exp., relative to the board			-0.341**	-0.387***	-0.426***	-0.403***
			(0.146)	(0.145)	(0.101)	(0.101)
Firm Performance:						
Average $ROE_{t,(t-1)}$	-0.005***		-0.004***		-0.001***	
	(0.002)		(0.001)		(0.000)	
Average Market Adj. Stock $Return_{t,(t-1)}$		-0.888***		-0.728***		-0.586***
		(0.142)		(0.131)		(0.059)
Control:						
Current Audit Committee Membership	-0.142*	-0.142*	-0.183**	-0.177**	-0.178***	-0.152***
	(0.083)	(0.083)	(0.080)	(0.080)	(0.047)	(0.047)

Table 5.5 ***(Continued)***
Logit Models for NEDs' Turnover in the UK PLCs Between 2000-2014

Variables	**BOFIs**				**Non-financial Sector**	
	General		**Relative**			
	Model (1)	*Model (2)*	*Model (3)*	*Model (4)*	*Model (5)*	*Model (6)*
Control: (Continued)						
Current Remuneration Committee Membership	-0.022	0.046	-0.010	0.059	-0.189***	-0.184***
	(0.084)	(0.082)	(0.078)	(0.077)	(0.051)	(0.050)
Current Nomination Committee Membership	-0.206**	-0.233***	-0.201**	-0.226***	-0.016	0.013
	(0.092)	(0.087)	(0.086)	(0.083)	(0.046)	(0.046)
Tenure in the firm's board	0.058***	0.056***	3.847***	3.806***	3.051***	2.762***
	(0.017)	(0.017)	(0.415)	(0.410)	(0.236)	(0.230)
Age	-0.193***	-0.183***	-0.210***	-0.199***	-0.147***	-0.130***
	(0.055)	(0.054)	(0.055)	(0.055)	(0.026)	(0.026)
Age^2	0.002***	0.002***	0.002***	0.002***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female NED	0.022	0.022	0.028	0.034	-0.056	-0.070
	(0.114)	(0.114)	(0.111)	(0.111)	(0.069)	(0.068)
Independence	-0.195	-0.188	-0.214*	-0.209*	-0.069	-0.059
	(0.120)	(0.120)	(0.123)	(0.123)	(0.056)	(0.057)
Firm Size (log TA)	0.053*	0.054**	0.072**	0.081***	0.029**	0.025**
	(0.030)	(0.028)	(0.029)	(0.026)	(0.013)	(0.012)
Control for Years	Yes	Yes	Yes	Yes	Yes	Yes
Control for Financial Sub Sectors	Yes	Yes	Yes	Yes		
Control for Sectors					Yes	Yes
Observations	10486	10495	10444	10474	29885	30599
Pseudo R2	0.0603	0.0635	0.0713	0.0753	0.0375	0.0412

Robust standard errors in parentheses. Level of significance for correlations coefficients are ***:0.01, **:0.05, *:0.1.
Shown here are logit regressions in which the dependent variable in year t is a binary variable that equals to one if the NED is on the firm's board in year t, but does not appear on the board in year $t+1$. In untabulated results, NEDs' number of board seats was replaced with dummy variables for NEDs' busyness that equals one if hold three and four board seats. It is found that 'busy' NEDs are still significantly more likely to keep their board seat. The standard errors are clustered by BOFIs' ID. Logit command was used to run the regression on STATA.

- *NEDs in UK Listed BOFIs.*

As regards firm performance, logit models 1 to 4 show a significant negative association, at 1% significance level, between NEDs' turnover and their affiliated firms' average ROE and market adjusted stock return, thus supporting hypothesis 1. Consistent with prior literature (Davidoff et al., 2014; Yermack, 2004), this findings indicate that NEDs are more likely to retain their seats (less probability of turnover) when their affiliated firms' show good performance.

Compared to the other model's variables, an estimation of marginal effect of models 2 and 4 variables indicates that ROE and average stock return of BOFIs are the best explanatory variables for NEDs turnover.[91] The discrepancies of the marginal effect between market and accounting measures of performance could reflect the heterogeneity of shareholders (Colpan and Yoshikawa, 2012) who use different proxies for evaluating firm performance.

With respect to NEDs' reputational capital and busyness, results in models 1 and 2 show an insignificant relationship between individual NEDs' reputational capital based on NEDs' educational qualification, social networks, chairmanship experience, and NEDs turnover. However, NEDs' number of board seats is significantly and negatively associated with NEDs' turnover. Therefore, hypothesis 2a is only partly supported and hypothesis 3a is fully supported. As a robustness check, NEDs' number of board seats was replaced by a dummy variable that capture NEDs' busyness more strictly (i.e. using three and four board seats as threshold for busyness). It is found that 'busy' NEDs are still significantly more likely to keep their board seat, hence further supporting hypothesis 3a. The results is consistent with the notion of 'selection effects' that talented NEDs are more busy (Falato et al., 2014), hence more likely to keep their seat and also consistent with the line of studies suggesting that NEDs with multiple directorships are seen as valuable additions to the board, possibly due to their reputation, competencies and connections to other firms.

[91] In models 1 and 2, the average marginal effect of BOFI's average stock return on the probability of NEDs' turnover is 3%, while it is 3.6% for the BOFIs' average ROE. Noteworthy, all models in this thesis consistently reports only raw coefficient. That is to facilitate comparison with other similar studies conducted in different countries.

Models 3 and 4 explore how boards overall competitive capital and busyness may affect the association between NEDs' individualities and turnover. The results indicate that all NEDs' relative reputational capital to be significantly (at 1% level) and negatively related to NEDs' turnover, thus support hypothesis 2b. Both these results provide important insights into the role that board's overall balance of skills and qualifications plays in determining turnover probability of individual directors. Regarding board's busyness, models 3 and 4 further explore the effect of the individual NED's busyness relative to their board busyness on turnover probability, using an interactive variable (i.e. Individual's Busyness Board's Busy). Although, NEDs' number of board seats is still negatively associated with turnover, results of the interactive term indicate that board's busyness turns this association into positive direction. In other words, in busy boards, an increase in the NEDs' number of board seats may increase their turnover probability. However, the coefficient of the interactive term is insignificant, hence hypothesis 2b is not supported.

As for NED-specific and firm-specific control variables included in models 1 to 4, results indicate NEDs' tenure on the board and age squared to be positively associated with the likelihood of turnover, at 1% significance level. This is not surprising as they may reflect the regulatory limitation on NEDs' years of services and directors' reaching retirement, respectively. Female NEDs seem to have a higher probability of turnover compared to their male counterparts, but the association is insignificant. Results indicate independence of NEDs to be negatively and significantly associated with turnover at only the 10% level for the BOFIs' models (3 & 4).

- *NEDs on Boards of UK Non-Financial Listed Companies.* To further explore the extent to which the results are sensitive to the BOFIs, a sample of NEDs in the UK non-financial firms was selected and regressed using the same variables as in models 3 and 4.

Although the associations between reputational capital variables and turnover in models 5 and 6 to a large extent mirror those for BOFIs in models 3 and 4, the significance level of the NEDs' number of board seats are different. Specifically,

model 5 shows negative association between NEDs' number of board seats and turnover but it is only significant at 10%, while in model 6 the seats-turnover association is not significant. When NEDs' number of board seats was substituted with more restrict dummies for NEDs' busyness (i.e. using three and four board seats as threshold for busyness), the negative association between seats-turnover still holds, yet became insignificant in both models 5 and 6.

Overall, these results indicate that number of board seats a given director has is seen as sign for talent in both financial and non-financial sectors. However, it seems that boards of BOFIs are more tolerant to directors' and boards' busyness compared to their counterparts in non-financial sector. This could be due to the nature of BOFIs' boards, where it is common for such firms' boards to be busy (Kaczmarek et al., 2014). Hence, shareholders do not 'punish' firms with busy boards or attempt to rectify that by voting against busy NEDs sitting on these firms.

With respect to firm performance-turnover, similar to the BOFIs' models, the average marginal effect of non-financial firms' performance on the probability of their NEDs' turnover is weaker than it is for BOFIs.[92] This could be attributed to BOFIs' directors being under greater institutional surveillance, compared to their counterparts in non-financial firms. Hence, turnover of directors is significantly tied to the perception on their affiliated firms' performance.

5.6.3 Did the Determinants of Turnover Change After the Financial Crisis?

This section will cover the fourth research question mentioned in this chapter (RQ6d). Specifically, it will answer this question:

[92] An estimation of marginal effect of variables in model 3 (4) shows that 1 SD decrease in the ROE of BOFIs' (average stock return) is associated with an increase in the probability of NEDs' turnover by 4% points (3.2%), compared to 1.4% (2.7%) for non-financial firms in model 5 (6).

- Is there a significant change in the relationship between NEDs' affiliated firms' performance, relative reputational capital, relative busyness, and the probability of NED's turnover in the post-crisis period?

Table 5.6 considers the impact of the financial crisis by splitting the sample into pre- and post-crisis periods: 2000–2007 and 2009-2014, respectively (excluding 2008 as the year of the crisis). Models 1 and 2 present the results for the association between NEDs' relative reputational capital variables, busyness of directors and boards, and firms' accounting performance (i.e. ROE), and NEDs' turnover for the pre- and post-financial crisis periods. Models 3 and 4 replicate the previous two models using firms' market performance (i.e. average stock return) instead of the accounting measure.

As can be seen in models 1 and 2 of Table 5.6, there is variation in the significance of the reputational capital variables pre- and post- the financial crisis period. Specifically, in the post-crisis period, only NEDs' relative educational qualifications seem to play a more significant role in increasing NEDs' chance to keep their board seats, thus hypothesis 4a is partially supported. The significance of NEDs' educational qualifications is understandable in the light of the increasing demand for such qualifications post-crisis.

On the other hand, results suggest that the negative effect that NED's number of board seats and network has on their turnover probability weakened in the post-crisis period. Firstly, NEDs' number of board seats (busyness) – which is significant (at 1% level) in the pre-crisis period – is still negatively associated with NEDs' probability of turnover in the post-crisis models but no longer significant. The existence of busy boards renders the association between NEDs' external board seats and turnover positive but insignificant. Hence, the results do not support hypothesis 4b.

However, overall, the decrease in the significance of NEDs' number of external board seats post-crisis may indicate that busy directors, as individuals, are increasingly losing their attractiveness in the employment market, regardless of their board busyness. Secondly, although NEDs' social network is still negatively

Table 5.6
Logit Models for NEDs' Turnover for UK Public Listed BOFIs Pre- Financial Crisis (2000-2007) and Post- Financial Crisis (2009-2014)

Variable	Accounting-Performance		Market-Performance	
	Model 1 Pre-Crisis	**Model 2 Post-Crisis**	**Model 3 Pre-Crisis**	**Model 4 Post-Crisis**
Director's Reputational capital & Busyness:				
NED's No. of Board Seats (Individual's Busyness)	-0.197***	-0.058	-0.200***	-0.056
	(0.061)	(0.037)	(0.059)	(0.037)
Individual's Busyness × Board's Busy	0.079	0.002	0.076	0.001
	(0.061)	(0.035)	(0.057)	(0.035)
NED's Educational Qual., relative to the board	-0.986*	-0.958**	-0.857*	-0.815**
	(0.512)	(0.427)	(0.511)	(0.402)
NED's Network, relative to the board	-1.513***	-0.529*	-1.463***	-0.595*
	(0.470)	(0.316)	(0.476)	(0.305)
NED's Chairmanship Exp., relative to the board	-0.389*	-0.263	-0.435*	-0.319*
	(0.225)	(0.178)	(0.230)	(0.172)
Firm Performance:				
Average $ROE_{t,(t-1)}$	-0.002	-0.005**		
	(0.002)	(0.002)		
Average Market Adjusted Stock $Return_{t,(t-1)}$			-0.381	-0.913***
			(0.253)	(0.176)
Control:				
Current Audit Committee Membership	-0.133	-0.216**	-0.184	-0.184*
	(0.129)	(0.099)	(0.123)	(0.098)
Current Remuneration Committee Membership	-0.083	0.038	-0.056	0.112
	(0.133)	(0.105)	(0.132)	(0.102)
Current Nomination Committee Membership	-0.391***	-0.095	-0.415***	-0.128
	(0.128)	(0.114)	(0.126)	(0.111)
Tenure in the firm's board	4.148***	3.794***	4.307***	3.646***
	(0.700)	(0.472)	(0.718)	(0.460)
Age	-0.309***	-0.220***	-0.316***	-0.188**
	(0.093)	(0.075)	(0.097)	(0.077)
Age^2	0.003***	0.002***	0.003***	0.002***
	(0.001)	(0.001)	(0.001)	(0.001)
Female NED	0.206	-0.065	0.145	0.011
	(0.188)	(0.164)	(0.192)	(0.157)
Independence	-0.211	-0.145	-0.214	-0.125
	(0.189)	(0.161)	(0.189)	(0.155)
Firm Size (log TA)	0.036	0.090***	0.063	0.085***
	(0.042)	(0.033)	(0.041)	(0.029)
Control for Years	Yes	Yes	Yes	Yes
Control for Financial Sub Sectors	Yes	Yes	Yes	Yes
Observations	3340	6154	3324	6214
Pseudo R2	0.0907	0.0691	0.094	0.0743

Robust standard errors in parentheses. Level of significance for correlations coefficients are ***:0.01, **:0.05, *:0.1.

Shown here are logit regressions in which the dependent variable in year t is a binary variable that equals to one if the NED is on the firm's board in year t, but does not appear on the board in year $t+1$. In untabulated results, NEDs' number of board seats was replaced with dummy variables for NEDs' busyness that equals one if hold three and four board seats. It is found that 'busy' NEDs are still significantly more likely to keep their board seat. The standard errors are clustered by BOFIs' ID. Logit command was used to run the regression on STATA.

associated with NEDs' probability of turnover in the post-crisis period, the level of significance of this association has dropped from 1% to 10%. One possible explanation could be that highly connected directors in BOFIs may be perceived as negative (i.e. cosy clubs) which may contribute to the agency problems faced in the pre-crisis period.

Models 1 and 3 show that firms' performance, over the pre-crisis period, has insignificant negative association with NEDs' turnover. However, models 2 and 4 show post-crisis firms' performance to be significantly related to turnover, thus supporting hypothesis 4c. This could be due to changes in the UK corporate governance following the crisis which witnessed greater media coverage, more restricted disciplinary regulations by the policy makers, and increased monitoring by concerned shareholders. For instance, there was documented steady increase in the voting turnout and 'beyond expectation' positive response by the investment community to the UK new Stewardship Code (FRC, 2010b), with some companies reporting increase in investors' engagement (FRC, 2011). Furthermore, contrary to the pre-crisis period, the association between NEDs turnover and accountability for their firm performance becomes more significant post-crisis (Beltratti and Stulz, 2012; Erkens et al., 2012).[93]

Interestingly, among the three board committees, membership of the audit committee has the only significant coefficient. The increasing calls for having a committee for risk management may have created a need for the NED's audit experience post-crisis. Results also show some changes, yet insignificant, on the probability of female NEDs' turnover. Female NEDs are more likely to keep their board seats in the post-crisis period which is consistent with the increasing pressure for more representation of female directors in the boardroom.[94] Finally, the remaining variables do not appear to be greatly affected by the crisis.

[93]For instance, among the amendments in the UK Corporate Governance Code (FRC, 2010a) was clarification that directors' responsibility for risk extends beyond the simple oversight of control system. Similarly, the introduction of the Senior Management Regime (SMR) promotes individual, rather than collective, accountability for the board's decisions.

[94]Davies Report (2011) in the UK called for increased representation of women on FTSE 100 boards to at least 25% by 2015 (Mulcahy and Linehan, 2014).

5.7. Chapter Summary

BOFIs lie at the heart of today's economy. NEDs of these BOFIs control strategic resources, and as such, are under greater scrutiny of investors, regulators, the press and the public in general. However, the financial sector continued to experience various problems (e.g. corporate failures) and even a cataclysmic event recently (i.e. the global financial crisis), which can be traced back to NEDs' incompetency and failure in exercising their 'gatekeeping' role diligently. Hence, changes in firms' board of directors are expected to take place in the wake of firms' poor performance. Little is known, however, about NEDs' turnover especially in the UK BOFIs. This study explores how NED's different reputational capital (i.e. education, network, and experience), relative to his/her board's collective skills are associated with the NEDs' turnover probability, while controlling for other personal and firm characteristics. Furthermore, the busyness of NEDs is examined to see if it may affect their turnover probability, especially when those directors are sitting on 'busy' boards. This study also analyses the sensitivity of NEDs' turnover to their firms' performance using a large sample of the UK-listed BOFIs over a period of 15-year.

Some evidence is found indicating that the association between NEDs' reputational capital and their probability of turnover is based on the board balance of skills. Secondly, NEDs' external number of board seats is found to be negatively associated with his/her turnover probability only when the board is not deemed busy. Thirdly, results indicate that the accounting and market performance of BOFIs where the NEDs serve are significantly – statistically and economically – associated with the NEDs' turnover probability.

Finally, following the global financial crisis, the UK BOFIs market witnesses the launch of several governance reforms (e.g. the Walker Review, the Code, and the Stewardship Code). Results indicate that post-crisis, NEDs seem to be held accountable for their firm performance in the UK. Also, it is found that while NEDs' different reputational capital (i.e. education, and network) matters for

their turnover probability in general, only the NEDs' education is significant post-crisis. Finally, busy NEDs are less likely to retain their internal slot on the board post-crisis, compared to the pre-crisis period.

Chapter 6

Conclusion

6.1. Introduction

The overall aim of this study is to investigate two main prerequisites for diligent executions of boards' roles, i.e. board's ability and directors' incentive. An effective board needs to possess sufficient ability to make the right decisions as much as it needs its members to be motivated to do so. Using a large dataset spanning over fifteen years (2000-14), this thesis first explores the UK's boards' ability, in terms of board diversity, board competitive capital, and board busyness. It also investigates the extent to which the employment market for directors, internally and externally, motivates them to execute their roles diligently. The discussion in this chapter highlights how the thesis has addressed the research questions about board's ability and directors' incentive. As mentioned in Chapter 1, the research questions were grouped into two main aims as discussed below.

The first aim is to provide a timely review of the UK plcs' boards with regard to their diversity attributes (i.e. statutory, competitive, and demographic), competitive capital (i.e. educational qualifications, social networking, and governance experiences), and busyness, over the last fifteen years (*Q1a, Q2a, Q3a*). This further includes exploring how these board's characteristics vary across FTSE index series (*Q1b, Q2b, Q3b*), how they were affected by the changes in governance regulations that followed the financial crisis (*Q1c, Q2c, Q3c*), and the extent to which they relate to firm's performance (*Q4*).

The second aim is to demonstrate the extent to which NEDs in the UK plcs are exposed to a market-based sanction system in which perceived performance will be rewarded or penalised externally (via the means of directorships) (*Q5a, Q5b*) and internally (via the means of turnover probability) (*Q6a, Q6b, Q6c*). This includes investigating how the changes in the UK regulatory environment that took place in the wake of the financial crisis may have affected the efficiency of the UK directors' employment market in incentivising NEDs (*Q5c, Q6d*).

Overall, this chapter summarises the main findings and contributions of the study to the field of corporate governance. It then concludes by discussing some of the limitations of this study, and avenues for future research.

6.2. Board's Ability: Insights on Board's Diversity, Capital, and Busyness

The purpose of chapter 3 is to provide a timely review of the UK boards' characteristics of most concern to both regulators and scholars. These board characteristics were grouped into three main categories; boards' diversity attributes, boards' competitive capital, and boards' busyness. Specifically, the chapter shows firstly, how the boards of the UK public listed firms evolved during the years with respect to those characteristics. Secondly, the chapter demonstrates the extent to which boards' diversity attributes, competitive capital, and busyness varied within the UK FTSE Index Series and how they were affected by the post-crisis new environment. Finally, the extent to which the previous boards' characteristics (i.e. diversity, competitive capital, and busyness), is related to the firms' financial performance, was examined.

With respect to board diversity, unsurprisingly, it was found that statutory diversity (SD) is the most common diversity attribute among UK plcs' boards, with about 41% of the UK firms described as highly diversified. However, the other two diversity attributes, the competitive (CD) and the demographic (DD), were found to be significantly less common. The data suggests that only 9% and 7% of firms in the sample can be classified to have high level of competitive and demographic

diversity, respectively. Overall, this picture is not surprising given that BSD has been the main focus of regulators for many years with little attention given to other types of diversity. However, the analysis indicates that over the last fifteen years, firms were increasingly diversifying their boards based on other attributes, i.e. BCD and BDD. This period also witnessed a trend of decreasing board size.

A closer look at the data reveals that the FTSE UK Index Series had a significant association with the extent of boards' diversity. Unsurprisingly, high- and mid-capitalised listed firms (FTSE100 & FTSE250) are normally associated with high level of board's diversity, while low-capitalised firms (FTSE SMALLCAP & FTSE Fledgling) are associated with lower level of board's diversity. One possible explanation for this association is perhaps that larger firms are more exposed to media and usually show more legitimacy seeking behaviour which eventually result in high level of board's openness and diversity. For instance, the UK corporate governance codes have some provisions tailored specifically to FTSE100 firms which may in turn, ultimately influence composition of their board.

In addition, post-crisis regulations seem to have some impact on the level of board diversity in all UK listed firms' (i.e. non-financial and financial). Interestingly, while diversity level for all firms' increased after the crisis, the significance of that impact seems to differ between non-financial and financial sectors. The increase was significant for statutory and demographic attributes but not the competitive attribute in the case of the non-financial sector. In contrast, the financial crisis appears to have a significant effect only on the competitive diversity of BOFIs' boards. Since BOFIs are known for their compliance with governance codes, this may explain why their boards show high level of statutory diversity. However, post-crisis, the regulators focused their attention on other diversity aspects which could explain the significant increase in competitive diversity witnessed in BOFIs' boards following the crisis.

Regarding board's competitive capital, as one might expect, FTSE100 firms had the most experienced, educated, and socially connected boards, with a general trend of boards getting significantly less 'competitive' as firm size decreases. These results suggest that the FTSE UK Index Series are significantly associated with

the board's level of competitive capital which seems to gradually decrease as firms get smaller and the level of complexity lessened. In addition to their need for competitive boards, large firms have also better means to attain scarce resources such as highly talented directors.

Post-crisis governance codes seem to have an impact on boards' competitive capital as well. It was found that both non-financial and financial listed firms have witnessed an increase in their board competitive capital, with the latter boards having considerably more qualified boards than the average firms in the entire UK market. In terms of the effect of financial crisis, the increase in board's competitive capital across the entire market was found to be significant for BOFIs' boards except for average number of educational qualifications which was statistically insignificant.

Chapter 3 also provides useful insights regarding the incidence of board's busyness among UK plcs. Five different measures that were used in previous studies were adopted to capture board's busyness. It was found that the extent of board's busyness varies considerably according to the measurement used. Specifically, based on number of directorships held only by NEDs, the incidence of board's busyness ranges from 18% to 40%. However, regardless of the measurement used, the incidence of board's busyness seems to be decreasing over the last fifteen years in the UK. This may simply reflect the regulatory pressure and shareholders' campaigns to limit the occurrence of overburdened boards. At the directors' level, consistent with the related literature, large firms seem to have more busy NEDs. One possible explanation in literature is the 'selection effects' of holding multiple board seats (Adams et al., 2010). This concept suggests that the most reputable or qualified NEDs are more likely to hold more board seats, and eventually classified as busy directors. Since large firms attract the most qualified directors on the market, they tend to have more busy boards. Furthermore, NEDs who work in FTSE100 firms might be perceived as "good" directors in the market, hence attract even more directorships compared to their counterparts. This explains the reason for higher percentage of board busyness among the FTSE100 firms.

At the board's level, when firms were grouped into two main categories based on their index (i.e. FTSE350, and FTSE SMALL & FLED), it was found that small firms have significantly more busy boards than larger firms, suggesting less tendency of the former group in complying with the Code with regards to busy boards. In contrast, using the proxy of busyness based on NEDs only instead of all directors indicates large firms have significantly more busy boards than small firms. These interesting findings explain to some extent the inconclusiveness of previous studies on board busyness. In addition, it highlights an important issue for regulators to consider in the future. The current restrictions by the regulators on the number of board seats a director can hold are mainly directed towards executives and NEDs are excluded on those provisions. If directors' busyness is to be discouraged, then the number of board seats held by NEDs, who monitor their EDs counterparts, should be restricted as well. Indeed, the Walker Review (2009) points to the importance of increasing the BOFIs' board overall time commitment rather than focusing on only EDs, an issue that should be encouraged to be considered for all sectors. The findings to some extent suggest that the post-crisis attempts to limit the occurrence of board busyness were successful. It was found that post-crisis years witnessed a significant decrease in the percentage of busy boards among UK listed firms.

Finally, based on correlation analysis, results indicate a significant positive relationship between the various diversity indices and board's competitive capital, and both market-based measures of financial performance. This suggests that firms with better performance, as measured by ROE and stock return, on average have more diversified and competitive boards. Although the analysis shows no significant relation between most measures of board's busyness and firm performance, there is a negative and significant relationship between board's workload and market-based measure of firm performance.

6.3. External Employment Market Incentives: Directorships

Chapter 4 provides evidence that the number of board seats held by NEDs of the UK BOFIs is mainly associated with their reputational capital i.e. educational

qualifications, social network, and governance experience rather than the performance of their affiliated firm(s). This suggests that NEDs in BOFIs who have the skills, qualifications, experience and social network may have higher number of board seats. However, when treating the financial crisis as an exogenous shock in understanding the market for NEDs, results indicate only reputational capital was significantly associated with number of board seats in the pre-crisis period but both the affiliated BOFIs' market performance and reputational capital were significant determinants in the post-crisis period. One possible explanation is that after the crisis, NEDs were held more accountable for their BOFIs' poor market performance. This may be attributed to several changes in the corporate governance codes (e.g. Stewardship Code, 2010; Corporate Governance Code, 2010) that have increased shareholders' activism in monitoring and holding NEDs more accountable for performance of their affiliated firms.

The results also show other interesting changes in the UK BOFIs' market after the crisis. For instance, female directors were found to have a higher chance of getting more board seats, echoing the recommendations in the Davies Report (2011). In addition, in line with the recommendation in the Walker Review (2009) for chairmen of major banks to devote around two-thirds of their time to the business entity, chairman working in large BOFIs do have less chance of getting additional board seats in the post-crisis period.

6.4. Internal Employment Market Incentives: Turnover

Chapter 5 examines the extent to which the turnover of NEDs serving on the boards of the UK listed BOFIs is associated with their firm's market and accounting financial performance. It also examines whether NEDs' turnover is related to their reputational capital (i.e. educational qualifications, social network, and governance experience) and their busyness, while controlling for their boards' balance of skills and busyness, respectively.

First, the findings show a statistically significant correlation between NEDs' turnover and their affiliated firm's financial performance, based on both ROE

and market adjusted stock return as proxies. This suggests the existence of ex-post settling-up mechanism in the UK BOFIs whereby NEDs can lose their board seats in the wake of a period of poor financial performance. Furthermore, the results show that NEDs' turnover is also sensitive to the performance of firms in the UK non-financial sector but less significant compared to BOFIs as the latter is highly regulated and monitored. Secondly, it was found that NED's turnover is significantly associated with some aspects of their reputational capital relative to their firm's board. This is consistent with the UK's Combined Code on Corporate Governance (FRC, 2003, 2008) which emphasises on the importance of considering the board overall balance of skills and competitive capital during the NEDs' appointment and annual re-election. Thirdly, over a sample period of fifteen years (1999-2014), it was found that 'busy' NEDs are more likely to keep their board seats. However, the number of external board seats a NED has is positively but insignificantly related to the probability of turnover when the board is considered busy. This suggests that busy NEDs' are less likely to keep their seat when their board is considered busy.

Finally, this study further examines NEDs' turnover in BOFIs in the aftermath of the global financial crisis. Compared to the pre-crisis period, NEDs' turnover-performance association was found to be statistically significant. This could be attributed to increased activism of the shareholders and also directors being encouraged to be more accountable by new regulations (e.g. Stewardship Code, and SM&CR). Contrary to expectations, apart from the directors' educational qualification, NEDs' reputational capital (e.g. social network) seem to play less significant role in relation to the NEDs' turnover in BOFIs. This could be attributed to the change in the market perception of highly-connected NEDs and the increased critiques of boards of directors turning into 'cosy clubs'. In addition, results show that the number of board seats held by NEDs and other proxies of NEDs' busyness, which were significantly and negatively associated to NEDs' turnover for the pre-crisis, are no longer significantly related to the probability of turnover after the crisis period. This could be due to the growing compliance with the Walker Review's recommendation for increasing boards' time commitment.

6.5. Research Policy Implications

The findings of this thesis document an overall increase in the diversity and the competitive capital of UK PLCs boards in the wake of financial crisis. However the significance of that increase varies between financial and non-financial sectors and among different FTSE Indices. One possible explanation for that variation is the different governance codes and provisions that target specific sector or group of firms. Overall, although the UK corporate governance environment remains voluntary in nature, it seems that post-crisis attempts to increase the level of board's capabilities and diversity were to some extent successful. Nonetheless, regulators are encouraged to issue a guideline/code devoted for highlighting the expected level of competencies and diversity a PLC board should have. The issue of board competencies has been often neglected and not considered a governance issue to be regulated in detail. In addition, the findings show a significant decrease in the level of board busyness in the wake of financial crisis. However, the results suggest that UK policymakers need to focus on limiting the incidence of board busyness rather than executive directors' busyness. Walker Review (2009) was a step on the right direction in this regard that worth expending to other sectors. That is, the review recommends increasing the overall time commitment of the board rather than limiting the number of directorships for individual directors.

Turning to NEDs' incentives, if regulators are to continue relying on NEDs through board-centred reforms, then a viable incentive system is crucially needed to sufficiently motivate NEDs to act in regulators' and shareholders' interests. NEDs' employment market is expected to be a penal system in which NEDs' career success in terms of gaining and losing board seat(s) is sensitive to their perceived performance based on NEDs' firm performance and reputational capital. The results of this thesis suggest that such a viable employment market for NEDs exist in the UK only following the financial crisis. Therefore, regulators are encouraged to continue enhancing the 'settling up' in employment market for NEDs. Potential avenues for improving the disciplinary role of NEDs' employment market are increasing shareholders activism, facilitating proxy access, boosting corporate disclosure and/or consider making amendments to the director election system.

6.6. Research Limitations and Future Research

While attempts have been made to conduct the empirical work rigorously, this thesis acknowledged some of the constraints. First, this study used only three main measures to capture board's competitive capital (i.e. educational qualifications, social network, and governance experience). However, compared to previous studies regarding board capital, the measures used for the purpose of this study are more 'holistic' as it captures multiple aspects of board capital rather than relying on a single agency theory-based measure (e.g., proportion of independent or outside directors). Future research could consider other aspects to be included in future models such as 'sector knowledge'. Furthermore, owing to disclosure limitation in the database, this study used straightforward measures of board's competitive capital and directors' reputational capital. For instance, director's education was measured by the number of qualifications a director has, yet in the market certain educational degrees or professional qualifications might be more attractive than others, which may affect both the board's competitive capital and individual director's career path differently. Therefore, future research may broaden the depth and the width of measuring directors' reputational capital.

Secondly, like most of previous studies, the used proxies do not directly capture the board dynamics and processes. Board dynamics represent the intermediate processes between boards' attributes and boards' outcome. On other words, it is about how board members make use of the available board capital to take decisions and fulfil their roles. There has been several calls for exploring board dynamics and directors' interactions in the boardroom by moving beyond the input-output approach (Pugliese, Nicholson, & Bezemer, 2015). Future researchers are encouraged to directly explore the board processes that could enhance the effective use of board capital that would lead to better board task performance.

Thirdly, future research may consider assessing social network differently, distinguishing between its beneficial and harmful consequences. The role of directors' network has been discussed differently in the literature. On one hand, directors' networks can be a proxy for 'cosy club', whereby network is seen as contributing

to agency problem and perceived as negative. On the other hand, proponents of resource dependence theory perceive directors' networks to be a valuable resource that would benefit firms through access to information, politicians, and regulators. Most studies do not distinguish between these two views of networks due possibly to the inclusive nature of these two views which made it 'empirically' challenging to be separated. The directors' networks that are being used to influence managerial decision would be also used for information gathering. Hence, future research may try to differentiate between these two types of networking when examining market consequences for directors.

Finally, the study did not have the necessary data to assess the effects of firm ownership structure in the turnover model as this requires hand collected information and this is not possible given the sheer size of the dataset. Firms with concentrated ownership or where institutional shareholders hold a significant percentage of firm's shares may impose greater discipline to underperforming directors. Although, compared to US, the UK market is relatively more concentrated, a better model would still count for the discrepancies among firms' ownership structure in the UK.

Appendix A

Table A.1
Summary of the Principles and Provisions in the UK Corporate Governance Code (2014)

The Main Principles		The Supporting Principles	Code Provisions
		Section A: Leadership	
A.1) The Role of the Board	Effective board of directors is a prerequisite to firms' long-term success.	• Board should provide entrepreneurial leadership while assessing and managing firm's risk. • The board should set the firm's strategic aims, aims, and values. • The board should ensure the appropriate allocation of financial and human resources, its obligations to its shareholder, and review management performance	• Regular and sufficient meeting of board should be carried out. • A formal schedule of matters specifically reserved for boards' decision • The annual reports should include; – A statement of how the board operates, types of decisions are to be taken by the board, and issues delegated to management – Detailed identification of board members and its committees. – The number of board' and committees' meetings and individual attendance by directors. • Appropriate insurance for directors to cover any legal action against them.
A.2) Responsibilities' Division	A clear division of executive and NEDs' duties. *(No Supporting Principles)*		• A separation between the roles of chairman and chief executive. The division of responsibilities should be clear, written, and agreed by the board.
A.3) The Chairman	The ultimate responsibility for board leadership and ensuring its effectiveness lies with the chairperson.	The chairman responsibility includes; • Setting the board's agenda and ensuring proper discussion of all its items.• Encouraging a culture of openness and debate, and ensuring constructive relations between executive and NEDs.• Ensure that an accurate and timely information is provided to NEDs • Ensure effective communication with shareholders.	• Chairman should be independent. CEO should not be the company Chairman, unless board got the major shareholders' approval. In this case, reasons for taking this decision need to be disclosed in the annual report.

Table A.1 ***(Continued)***
Summary of the Principles and Provisions in the UK Corporate Governance Code (2014)

A.4) NEDs	NEDs should constructively challenge and help develop proposals on strategy.	• NEDs should carefully monitor the management performance regarding goals' achievement and reporting of performance. • NEDs are responsible for setting appropriate executives' remuneration and have an essential role in appointing and replacing executives where necessary. • NEDs should ensure the integrity of financial information. • NEDs should ensure that financial controls and systems of risk management are robust and defensible.	• A senior independent director should be appointed by the board. He is expected to help the chairman, serve as an intermediary, be available to shareholders to be contacted when normal channels has failed to help. • The senior independent director should led a meeting, at least annually, with other NEDs to evaluate chairman performance. In addition, another meeting for NEDs, led by chairman, should be hold without the executives' present. • NEDs should ensure that their concerns regarding firm's management, if any, are recorded in the board minutes. • NED's resignation should be in written form, submitted to the chairman, and circulated to the board.
		Section B: Effectiveness	
B.1) The Composition of the Board	Appropriate balance of skills, experience, independence and knowledge of the company to ensure effective discharge of board's responsibilities.	• Ensure sufficient board size to meet business requirements and to avoid disruption if changes to the board's composition need to be made. • Ensure appropriate combination of executive and independent NEDs, hence, decision taking is not dominated by a small group. • When appointing chairman and committees' members, board should ensure that membership is refreshed, and avoid undue reliance on particular directors. • Only committee members is entitled to be present at a meeting of the three committees. However, the committee can invite others to attend.	• Company's annual report should show the 'independence' statues for each NED.[1] • At least half of listed companies' boards, except for smaller companies, should be comprised of independent NEDs. • Small firms' boards should have at least two independent NEDs.
B.2) Appointments to the Board	Directors' appointment procedure should be formal, rigorous and transparent.	• The appointments should be made on merit, while ensuring board diversity, including gender. • Board should ensure having appointments plans for orderly succession to the board and to senior management. These plans should maintain board diversity and balance of skills and experience.	• The process for board appointments should led by nomination committee, which make recommendations to the board as well. The nomination committee should 'make available its terms of reference, explaining its role and the authority delegated to it by the board' • The nomination committee should be dominated by independent NEDs. The chairman or an independent NED should chair the committee.[2] • A careful evaluation of board diversity of skills, experience, independence and knowledge is a crucial prerequisite for preparing a description of the capabilities required for a particular appointment. • NEDs should be appointed *'for specified terms subject to re-election and to statutory provisions relating to the removal of a director'*. If a NED is to continue for more than six years, a rigorous review should be undertaken with due regard for the need for progressive refreshing of the board. • The nominations issues should be addressed in a separate section of firm annual report. That include the work of committee, the used appointments process, board's policy on diversity, and progress on achieving the objectives. • The choice of using open advertising or external search consultancy for directors' appointment should be explained in the annual report and *'a statement made as to whether it has any other connection with the company'*.

Table A.1 ***(Continued)***
Summary of the Principles and Provisions in the UK Corporate Governance Code (2014)

B.3) Commitment	Directors should commit sufficient time to the company. *(No Supporting Principles)*		• Nomination committee is responsible for preparing a job specification for the chairman post. It should include the time commitment expected, and the need for availability in the event of crises. On the other hand, chairman should disclose all significant commitments he/she has before appointment and included in the annual report. Changes to such commitments should be reported in the next annual report. • The letter of appointment should state the expected time commitment. NEDs should express their ability to meet these expectations while disclosing all significant commitments he/she has before appointment. • The board *'should not agree to a full time executive director taking on more than one non-executive directorship in a FTSE 100 company nor the chairmanship of such a company'*
B.4) Development	Directors should be trained regularly.	• It is the chairman's responsibility to ensure that directors' skills, knowledge and familiarity with the company are continually updated. • Resources required for this matter should be provided by the firm.	• It is the chairman's responsibility to – Ensure that new directors get induction once appointed. Induction should be full, formal and tailored and include meeting major shareholders. – Review the training and development needs for each director.
B.5) Information and Support	Quality information should be supplied to the board of directors in a timely manner.	• It is the chairman's responsibility to ensure that the directors receive accurate, timely and clear information. On the other hand, management is obligated to provide such information. However, directors should ask for clarification where necessary. • It is the secretary's responsibility, under chairman's supervision, to ensure good flow of information within the board and its committees and between senior management and NEDs. It is also responsible for *'advising the board through the chairman on all governance matters'*.	• Company should provide the required resources to get an access to independent professional advice whenever needed by directors, especially NEDs. In addition, committees should be provided with sufficient resources to undertake their duties. • Company secretary's services should be available to all directors. Both the appointment and removal of the company secretary should be a matter for the board as a whole.
B.6) Evaluation	A formal and rigorous evaluation of the board performance should be undertaken annually	• Evaluation of the board should consider all factors relevant to its effectiveness, including – The balance of skills, experience, independence and knowledge of the company. – Board diversity, including gender. – How the board works together as a unit. • This evaluation should be used by the chairman to decide on directors' appointment, removal, and the training programs. • Evaluation of directors should be designed to show director's contribution and commitment to the role (incl. devoted time)	• The way the performance evaluation has been conducted should be disclosed in the annual report. • For FTSE 350 firms, evaluation of the board should be conducted externally at least every three years. The annual report should clearly identify the external facilitator and their connection with the firm, if any. • Performance evaluation of the chairman should be conducted by NEDs and led by the senior independent director. Executive directors' views need to be taken into account in chairman's review.

Table A.1 ***(Continued)***
Summary of the Principles and Provisions in the UK Corporate Governance Code (2014)

B.7) Re-election	All directors should be submitted for re-election at regular intervals.*(No Supporting Principles)*		• For FTSE 350 firms, all directors should be subject to annual election by shareholders. • *'All other directors should be subject to election by shareholders at the first annual general meeting after their appointment, and to re-election thereafter at intervals of no more than three years'.* • NEDs who have served longer than nine years should be subject to annual re-election. Sufficient biographical details should be disclosed to ensure an informed decision by shareholders. • When appointing a NED, the board need to show shareholders, in writing, why they believe he/she should be elected. • When proposing re-election for NED, the chairman should confirm to shareholders that based on formal performance evaluation, this NED continues to be effective and to demonstrate commitment to the role.
		Section C: Accountability	
C.1) Financial and Business Reporting	A fair, balanced and understandable assessment of the company's position and prospects should be presented by board of directors.	• It is the board's responsibility to – Present *'a fair, balanced and understandable assessment extends to interim and other price-sensitive public reports and reports to regulators as well as to information required to be presented by statutory requirements'.* – Establish arrangements to ensure the quality of information presented.	• The annual reports should include; – Explanation of directors' responsibility for preparing the information provided in the annual report and provide any necessary information to shareholders as required. – A statement by the auditor about their reporting responsibilities should be made as well. – The business model used to generate or preserves value over the longer term and the strategy for achieving firm's goals. • *'The directors should report in annual and half-yearly financial statements that the business is a going concern, with supporting assumptions or qualifications as necessary'.*
C.2) Risk Management and Internal Control	It is board's responsibility to determine the extent of firm's risk, with due regard to the shareholders' interest and sound risk management and internal control systems.*(No Supporting Principles)*		• At least once a year, a review of the effectiveness of the company's risk management and internal control systems should be conduct. Review's results should be reported to shareholders. The review should cover all material controls, including financial, operational and compliance controls.
C.3) Audit Committee and Auditors	The responsibility of establishing corporate reporting, risk management and internal control formally and transparently lies with the board of directors.*(No Supporting Principles)*		• The audit committee should be composed of at least three independent NEDs. For smaller firms, 'independent' chairman can be a member of, but not chair, the committee. • At least one member of the audit committee need to have recent and relevant financial experience. • The audit committee's role, responsibilities and the authority delegated to it should be set out in written terms of reference, and made available. • The audit committee should; – Provide advice on the quality of information provided in reports where requested by the board. In addition, they should provide the information necessary for shareholders to evaluate the firm. – Review channels through which staff can raise their concerns regarding possible improprieties in financial reporting issues. They should ensure that independent investigation, and follow-up actions can be taken in such scenarios.

Table A.1 ***(Continued)***
Summary of the Principles and Provisions in the UK Corporate Governance Code (2014)

C.3) *(Continued)*			– Review the effectiveness of the internal audit activities. For firms who do not have internal audit function, audit committee should consider if there is a need for this function and reasons for its absence should be disclosed in reports. – Make a recommendation on the appointment, and removal of the external auditors. If board chose not to follow their recommendations, a statement from the audit committee should be given in the annual report, explaining their initial recommendations along with reasons why board took a different position. • The audit committee issues should be addressed in a separate section of firm annual report. That include material issue considered by the committee, how the external audit process' effectiveness has been assessed, the process of appointing the external auditor, and length of tenure of the current audit firm. In case if the external auditor provides non-audit services, a statement regarding auditor's independence should be made.
		Section D: Remuneration Executive	
D.1) The Level and Components of Remuneration	Remuneration of executive directors should be designed to encourage firms' long-term success.	• For executives' remuneration, performance-related elements should be designed to promote the long-term success of the firm. • Although remuneration is used to position companies against their counterparts, remuneration committee should be cautious not to end up with high remuneration levels with no corresponding improvement in performance. • Remuneration should be *'sensitive to pay and employment conditions elsewhere in the group'*	• For the executive directors who are released to serve elsewhere as a NED, the remuneration report should indicate whether these directors would retain such earnings or not. • Levels of remuneration for NEDs should reflect *'the time commitment and responsibilities of the role'*. NEDs' remuneration package should not include performance-related elements (e.g. share options), unless shareholders' approval is granted in advance. Shares acquired by exercise of the options should *'be held until at least one year after the NEDs leaves the board'*. • To avoid rewarding poor performance, remuneration committee should appropriately consider compensations' elements for early-terminated directors' contracts. • Contract periods should be set at one year or less.
D.2) Procedure	Formal and transparent development of executive remuneration policy. Director should not be involved in deciding his/her own remuneration	• Chairman and/or chief executive should be consulted regarding the level of executives' remuneration. However, remuneration committee should be also cautious when talking advices from senior management due to possible conflict of interests. • Appointing consultants in respect of executives' remuneration is the remuneration committee's responsibilities.	• The remuneration committee should be composed of at least three independent NEDs. Chairman, if independent, can be a member of, but not chair, the committee. The remuneration committee's role, responsibilities and the authority delegated to it should be set out in written terms of reference, and made available. The choice of remuneration consultants should be explained in the annual report and *'a statement made as to whether it has any other connection with the company'*. • The responsibility of setting all remuneration elements for all executives, chairman, and senior management lies with remuneration committee.

Table A.1 ***(Continued)***
Summary of the principles and provisions in the UK Corporate Governance Code (2014)

D.2) *(Continued)*		• It is the chairman's responsibility to ensure that firm maintains contact as required with its major shareholders about remuneration.	• The responsibility of setting remuneration for NEDs lies with the board itself or the shareholders. NEDs' remuneration should be within the limits set in the Articles of Association. *'Where permitted by the Articles, the board may however delegate this responsibility to a committee, which might include the chief executive'.* • New long-term incentive schemes and significant changes to existing schemes should be approved by shareholders.
Section E: Relations with shareholders			
E.1) Dialogue with Shareholders	A satisfactory dialogue with shareholders should be encouraged by the whole board of directors.	• Although the majority of shareholders' regular contact is with the CEO and finance director, it the chairman's responsibility to ensure that all directors are made aware of major shareholders' concerns. • It is the board's responsibility to *'keep in touch with shareholder opinion in whatever ways are most practical and efficient'.*	• It the chairman's responsibility to ensure that shareholders' perspectives are understood by the whole board, discuss governance and strategy with major shareholders, and arrange for NEDs - major shareholders' meetings. The senior independent NED should sufficiently meet major shareholders to be aware of major shareholders' concerns. • Annual report should clearly state the steps (e.g. meetings) have been taken by the board to ensure that NEDs developed an understanding of the views of major shareholders.
E.2) Constructive Use of the AGM	General meetings represent a good opportunity to communicate with investors and hence their participation should be encouraged. *(No Supporting Principles)*		• At any general meeting, *'the company should propose a separate resolution on each substantially separate issue, and should in particular propose a resolution at the AGM relating to the report and accounts'.* Shareholders have three options (for, against, or withhold) to choose from for each resolution. • At any general meeting, valid proxy appointments should be properly recorded and counted. The number of shares associated with valid proxy appointments should be made available on website ASAP, along with the number of votes for each one of the voting options. • All directors, especially chairmen of the three board's committees, should be encouraged by chairman to attend AGM to answer any questions. • Notice of the AGM and all related papers should be sent to shareholders at least 20 working days before the AGM date.

Table B.1
Different Definitions and Measurements of Interlocked Directorates in Literature

Author(s)	Used Term	Definition	Measurement	Sample
Hallock (1997)	Reciprocal CEO Interlock	If two CEOs, or their subordinates, serve on each other's boards, they are reciprocally interlocked.	Two main types of interlocked firms; (1) Any current or retired employee (incl. the CEO) from a firm (A) sits on firm (B)'s board, and any current or retired employee (incl. the CEO) from a firm (B) sits on firm (A)'s board. (2) The current CEO of a firm (A) serves as a director of a firm (B) and the current CEO of the firm (B) serves as a director of the firm (A).	• 602 of the US's major corporations on 1992 • US micro- micro link (interlock-executive compensation)
Ferris et al. (2003)	Directorships Per Director	The total number of directorships held by all board members divided by the board size.	(1) The average number of a given firm directorships held by all the directors of that firm. (2) The average number of directorships held by the NED of a given firm. (3) A firm has a CEO as a multiple director if any executive holds three or more directorships.	• US micro- macro link (interlock-firm performance) • 3,190 of the US companies on 1997
Harris & Shimizu (2004)	Overboarded Directors	Overboarded directors are – CEOs or EDs who sit on more than three seats (incl. their own). – NEDs who sit on more than six seats.	(1) The percentage of overboarded directors at each firm (total number of overboarded directors/ board size). (2) Three other measurements to calculate the proportion of overboarded directors, using the number of directors that sit on more than four, five and six boards.	• The top annual 100 merger and acquisition deals (N = 143) over 1981–1989 • US micro- macro link (interlock-M&A performance)

Table B.1 ***(Continued)***
Different Definitions and Measurements of Interlocked Directorates in Literature

Author(s)	Used Term	Definition	Measurement	Sample
Perry & Peyer (2005)	Multiple Directorships for Executives	Executive directors who accept NED directorships.	Two main types of multiple executives with respect to their firm agency problems. (1) EDs holding two or more directorships with lower relative executive stock ownership and for firms without a majority of independent NEDs. (2) EDs holding two or more directorships with higher relative executive stock ownership and independent firm board.	• A sample of new director appointments in the US firms (N=349) over 1994-1996 • US micro- macro link (interlock-firm performance)
Fich & Shivdasani (2006)	Busy Boards	NED is considered busy if she/he serves on three or more boards.	(1) Busy board indicator takes the value of one if 50% or more of the board's NEDs are busy. (2) The percentage of NEDs that are busy on a given firm's board.	• 508 industrial US firms over 1989 to 1995 • US micro- macro link (interlock-firm performance)
Kiel & Nicholson (2006)	Multiple Directorships & Director workloads	Director with more than one board seats.	(1) Total Directorships; the sum of all directorships held by directors who served on the board. (2) Board Connectedness; counting for the board size and calculated as [(Total Directorships Board Size)/Board Size] (3) Board Workload; the total workload of a board is measured using the ASA's guidelines. A workload of chairmanship (deputy chairmanship) equals three (two) times the effort of a single directorship.	• 1250 of the Australian listed firms on 2003 • Australia micro- macro link (interlock-firm performance)

Table C.1
An Illustrative Example for Deriving Director's and Board's Busyness – 3I GROUP PLC for Fiscal Year 2006

	Number of Seats/Workload					Director's Busyness (1 = Busy Director)		Boards' Busyness (1 = Busy Board)				
	1	2	3	4	5	6	7	8	9	10	11	12
Director Name	**Director Role**	**Current # of Seats**	**Workload**	**Average # of seat-s/direc-tor**	**Average # of seat-s/NED**	**Busy Direc-tor (based on 2)**	**Busy Direc-tor (based on 3)**	**Busy Board (based on 4)**	**Busy Board (based on 5)**	**Busy Board (based on 6)**	**Busy Board (based on 6-NEDs only)**	**Busy Board (based on 7)**
Sarah M. Hogg	SD	4	7	2.9	3.29	1	1	0	1	1	1	1
Christine J. Morin-Postel	SD	3	3	2.9	3.29	1	1	0	1	1	1	1
Franklin D. Rosenkranz	SD	2	2	2.9	3.29	0	0	0	1	1	1	1
Frederick G. Steingraber	SD	3	3	2.9	3.29	1	1	0	1	1	1	1
Robert H. Smith of Kelvin	SD	5	5	2.9	3.29	1	1	0	1	1	1	1
Oliver H. Stocken	SD	4	6	2.9	3.29	1	1	0	1	1	1	1
Robert W. Swannell	SD	2	2	2.9	3.29	0	0	0	1	1	1	1
Michael J. Queen	ED	2	2	2.9	-	0	0	0	1	1	1	1
Philip Edward	ED	2	5	2.9	-	0	1	0	1	1	1	1
Simon P. Ball	ED	2	2	2.9	-	0	0	0	1	1	1	1

Appendix D

Table D.1
Board Busyness Across the UK Listed Firms' Different Sectors Over 1999-2014

Sector	Board Busyness	Directorships per NED	N
Tobacco	68.75%	3.187277	32
Private Equity	56.36%	3.161212	55
Life Assurance	46.40%	2.67754	125
Steel & Other Metals	43.48%	2.262776	46
Diversified Industrials	41.67%	2.442857	84
Containers & Packaging	40.46%	2.171901	131
Mining	38.46%	2.357551	1,105
Investment Companies	37.54%	2.574898	1,750
Consumer Services	35.71%	2.24983	56
Clothing, , Leisure and Personal Products	35.45%	2.106926	268
Food & Drug Retailers	33.33%	2.134788	135
Forestry & Paper	32.43%	2.148649	37
Beverages	31.53%	2.121371	111
Speciality & Other Finance	31.42%	2.159308	1,375
Pharmaceutic and Biotechnology	30.63%	2.127185	715
Insurance	29.27%	2.321984	287
Automobiles & Parts	29.25%	2.254019	212
Health	28.23%	2.152304	457
Leisure & Hotels	27.80%	2.171212	759
Telecommunication	27.70%	2.077341	361
Renewable Energy	27.42%	2.083257	186
Business Services	27.12%	2.055877	1,648
Engineering & Machinery	26.75%	2.070115	830
Software & Computer Services	26.60%	2.048328	1,410
Chemicals	26.11%	2.079693	226
Information Technology Hardware	25.78%	1.967764	384
Media & Entertainment	25.42%	1.993473	1,353
Food Producers & Processors	25.41%	2.121093	362
Banks	24.67%	2.21397	150
Transport	23.13%	2.107775	441
Electricity	22.95%	2.107865	122
General Retailers	22.76%	1.994785	725
Publishing	22.50%	1.858333	40

Table D.1 ***(Continued)***
Board Busyness Across the UK Listed Firms' Different Sectors Over 1999-2014

Sector	**Board Busyness**	**Directorships per NED**	**N**
Oil & Gas	22.28%	1.988705	893
Electronic & Electrical Equipment	22.15%	1.882361	614
Construction & Building Materials	21.49%	1.937348	726
Real Estate	19.85%	1.881879	917
Aerospace & Defence	19.68%	2.057633	188
Utilities – Other	19.17%	2.199147	120
Household Products	13.59%	1.807065	184
Total	28.20%	2.129666	19,620

Appendix E

Table E.1
Robustness Test 1 - Chapter 4: Ordered Logit Models for NEDs' Board Seats in Quoted Firms Over 2000-14

	Control Models		**Reputational Capital Models**	
Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Market Adj. Stock Return$_{(t-2)}$	0.073		0.097	
	(0.070)		(0.070)	
ROA$_{(t-2)}$		-0.038		-0.054
		(0.110)		(0.115)
Number of professional & educational qualifications			0.090**	0.099***
			(0.036)	(0.036)
Social networks			0.318***	0.297***
			(0.053)	(0.052)
Governance experience in quoted firms (years)			0.110***	0.111***
			(0.015)	(0.015)
Audit committee membership experience			-0.008	-0.022
			(0.095)	(0.097)
Remuneration committee membership experience			0.045	0.049
			(0.079)	(0.079)
Nomination committee membership experience			0.193**	0.202**
			(0.094)	(0.095)
Tenure	-0.029***	-0.027***	-0.050***	-0.048***
	(0.008)	(0.008)	(0.011)	(0.011)
Age	0.313***	0.345***	0.329***	0.367***
	(0.055)	(0.056)	(0.058)	(0.059)
Age^2	-0.003***	-0.003***	-0.003***	-0.003***
	(0.000)	(0.000)	(0.001)	(0.001)
Gender (Female NEDs)	0.165	0.184	0.244*	0.268**
	(0.136)	(0.136)	(0.129)	(0.128)
NED Independence	-0.012	-0.006	-0.016	-0.003
	(0.111)	(0.111)	(0.116)	(0.117)
Busy NEDs	5.484***	5.503***	5.397***	5.412***
	(0.113)	(0.112)	(0.117)	(0.115)
Chairmanship	0.790**	0.847**	0.974***	1.036***
	(0.353)	(0.349)	(0.367)	(0.363)
Busy Chairman (Chairmanship × Firm Size)	-0.048*	-0.052**	-0.068**	-0.074***
	(0.026)	(0.026)	(0.027)	(0.027)
Firm Size (log TA)	0.083***	0.087***	0.030	0.036
	(0.024)	(0.026)	(0.024)	(0.025)
Year Controls	YES	YES	YES	YES
Sub-Sectors Controls	YES	YES	YES	YES
Observations	9,875	9,989	9,753	9,867
Pseudo R2	0.289	0.291	0.311	0.312

Robust standard errors in parentheses. Level of significance for correlations coefficients are ***:0.01, **:0.05, *:0.1.

Shown here are ordered logit regressions in which the dependent variable in year t is the number of board seats held by NEDs in year t+1 in quoted firms and ranges from one to four board seats. Busy NEDs variable was replaced with the number of board seats a NED has in year t. ROE$_{(t-2)}$ was replaced with ROA$_{(t-2)}$. The standard errors are clustered by BOFIs' ID.

Table E.2
Robustness Test 2 - Chapter 4: Ordered Logit Models for NEDs' Board Seats in Quoted Firms Over 2000-14

	Control Models		**Reputational Capital Models**	
Variable	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Average Adj. Stock Return	-0.168		-0.170	
	(0.103)		(0.104)	
Average EPS		-0.022		-0.002
		(0.055)		(0.050)
Number of professional & educational qualifications			0.086**	0.086**
			(0.035)	(0.036)
Social networks			0.324***	0.319***
			(0.053)	(0.053)
Governance experience in quoted firms (years)			0.110***	0.109***
			(0.014)	(0.014)
Audit committee membership experience			-0.030	-0.024
			(0.092)	(0.093)
Remuneration committee membership experience			0.038	0.055
			(0.077)	(0.077)
Nomination committee membership experience			0.209**	0.206**
			(0.094)	(0.094)
Tenure	-0.028***	-0.027***	-0.049***	-0.049***
	(0.008)	(0.008)	(0.011)	(0.011)
Age	0.317***	0.324***	0.337***	0.344***
	(0.054)	(0.054)	(0.057)	(0.058)
Age^2	-0.003***	-0.003***	-0.003***	-0.003***
	(0.000)	(0.000)	(0.000)	(0.001)
Gender (Female NEDs)	0.156	0.155	0.241*	0.241*
	(0.135)	(0.135)	(0.128)	(0.128)
NED Independence	0.011	-0.021	0.014	-0.018
	(0.108)	(0.107)	(0.112)	(0.113)
Busy NEDs	5.502***	5.489***	5.413***	5.403***
	(0.110)	(0.109)	(0.113)	(0.112)
Chairmanship	0.836**	0.901**	1.023***	1.074***
	(0.344)	(0.353)	(0.356)	(0.368)
Busy Chairman (Chairmanship × Firm Size)	-0.050**	-0.055**	-0.071***	-0.074***
	(0.025)	(0.026)	(0.026)	(0.027)
Firm Size (log TA)	0.090***	0.091***	0.036	0.037
	(0.025)	(0.025)	(0.024)	(0.024)
Year Controls	YES	YES	YES	YES
Sub-Sectors Controls	YES	YES	YES	YES
Observations	10,328	10,292	10,199	10,165
Pseudo R2	0.291	0.292	0.313	0.313

Robust standard errors in parentheses. Level of significance for correlations coefficients are ***:0.01, **:0.05, *:0.1.

Shown here are ordered logit regressions in which the dependent variable in year t is the number of board seats held by NEDs in year t+1 in quoted firms and ranges from one to four board seats. Busy NEDs variable was replaced with the number of board seats a NED has in year t.Stock $\text{Return}_{(t-2)}$ was replaced with Average Stock $\text{Return}_{(t,t-1)}$. $\text{ROE}_{(t-2)}$ was replaced with Average $\text{EPS}_{(t,t-1)}$. The standard errors are clustered by BOFIs' ID.

Table F.1
Robustness Test - Chapter 5: Logit Models for NEDs' Turnover in the UK PLCs Between 2000-2014

Variables	BOFIs				Non-financial Sector	
	General		Relative			
	Model (1)	*Model (2)*	*Model (3)*	*Model (4)*	*Model (5)*	*Model (6)*
Director's Reputational capital & Busyness:						
NED's Educational Qualifications	-0.013	-0.008				
	(0.028)	(0.027)				
NED's Network	-0.065	-0.057				
	(0.053)	(0.054)				
NED's Chairmanship Experience in Listed Firms	0.089	0.066				
	(0.081)	(0.080)				
NED's No. of Board Seats (Individual's Busyness)	-0.099***	-0.104***	-0.102***	-0.102***	-0.039**	-0.028
	(0.026)	(0.026)	(0.029)	(0.029)	(0.018)	(0.018)
Individual's Busyness × Board's Busyness			0.025	0.019	0.020	0.012
			(0.030)	(0.029)	(0.017)	(0.016)
NED's Educational Qual., relative to the board			-0.882***	-0.833***	-0.423**	-0.513***
			(0.310)	(0.314)	(0.171)	(0.168)
NED's Network, relative to the board			-0.676***	-0.753***	-0.623***	-0.740***
			(0.240)	(0.248)	(0.123)	(0.122)
NED's Chairmanship Exp., relative to the board			-0.355**	-0.387***	-0.399***	-0.403***
			(0.144)	(0.145)	(0.100)	(0.100)

Table F.1 ***(Continued)***
Logit Models for NEDs' Turnover in the UK PLCs Between 2000-2014

Variables	BOFIs				Non-financial Sector	
	General		Relative			
	Model (1)	*Model (2)*	*Model (3)*	*Model (4)*	*Model (5)*	*Model (6)*
Firm Performance:						
Average $ROA_{t,(t-1)}$	-0.546		-0.340		-0.324***	
	(0.397)		(0.365)		(0.069)	
Average Market Adj. Stock $Return_{t,(t-1)}$		-0.888***		-0.728***		-0.586***
		(0.142)		(0.131)		(0.059)
Control:						
Current Audit Committee Membership	-0.145*	-0.142*	-0.181**	-0.177**	-0.157***	-0.152***
	(0.084)	(0.083)	(0.081)	(0.080)	(0.048)	(0.047)
Current Remuneration Committee Membership	0.033	0.046	0.040	0.059	-0.180***	-0.184***
	(0.082)	(0.082)	(0.078)	(0.077)	(0.051)	(0.050)
Current Nomination Committee Membership	-0.243***	-0.233***	-0.233***	-0.226***	-0.006	0.013
	(0.089)	(0.087)	(0.085)	(0.083)	(0.046)	(0.046)
Tenure in the firm's board	0.057***	0.056***	3.881***	3.806***	2.918***	2.762***
	(0.016)	(0.017)	(0.414)	(0.410)	(0.232)	(0.230)
Age	-0.183***	-0.183***	-0.199***	-0.199***	-0.137***	-0.130***
	(0.054)	(0.054)	(0.053)	(0.055)	(0.026)	(0.026)
Age^2	0.002***	0.002***	0.002***	0.002***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female NED	0.051	0.022	0.057	0.034	-0.060	-0.070
	(0.115)	(0.114)	(0.113)	(0.111)	(0.067)	(0.068)
Independence	-0.216*	-0.188	-0.230**	-0.209*	-0.079	-0.059
	(0.112)	(0.120)	(0.116)	(0.123)	(0.055)	(0.057)
Firm Size (log TA)	0.044	0.054**	0.067**	0.081***	0.035***	0.025**
	(0.028)	(0.028)	(0.026)	(0.026)	(0.012)	(0.012)
Control for Years	Yes	Yes	Yes	Yes	Yes	Yes
Control for Financial Sub Sectors	Yes	Yes	Yes	Yes		
Control for Sectors					Yes	Yes
Observations	10,617	10,495	10,574	10,474	31,022	30,599
Pseudo R2	0.0588	0.0635	0.0709	0.0753	0.0364	0.0412

Robust standard errors in parentheses. Level of significance for correlations coefficients are ***:0.01, **:0.05, *:0.1.
Shown here are logit regressions in which the dependent variable in year t is a binary variable that equals to one if the NED is on the firm's board in year t, but does not appear on the board in year $t+1$. NEDs' number of board seats was replaced with dummy variables for NEDs' busyness that equals one if hold three and four board seats. ROE was replaced with ROA.

Appendix G

Sample of STATA Command Lines Used in Chapter 6

```
1  ***********************************************
2  *PART ONE: NEW Variables & Adjustments
3  ***********************************************
4  *1.1 Chairmanship Experience
5  *******************************
6  sort IndividualName year_proxy CompanyName
7  gen      ChairmanExp=boss
8  replace ChairmanExp=. if boss==0
9      by IndividualName: carryforward ChairmanExp, gen(ChairmanExp2)
10     replace ChairmanExp2=0 if ChairmanExp2==.
11         bysort id_director_year:  egen bossExp = mean (ChairmanExp2)
12         bysort id_director_year:  replace bossExp = 1 if bossExp >0 &
       bossExp !=.
13         drop ChairmanExp ChairmanExp2
14
15 *1.2 Deputy Experience
16 *************************
17 sort IndividualName year_proxy CompanyName
18 gen      DeptyExp=vice
19 replace DeptyExp=. if vice==0
20     by IndividualName: carryforward DeptyExp, gen(DeptyExp2)
21     replace DeptyExp2=0 if DeptyExp2==.
22         bysort id_director_year:  egen viceExp = mean (DeptyExp2)
23         bysort id_director_year:  replace viceExp = 1 if viceExp >0 &
       viceExp !=.
24         drop DeptyExp DeptyExp2
25
26 *1.3 Chairmanship and Deputy Experience
27 ****************************************
28 gen BossViceExp=0
29 replace BossViceExp=1 if viceExp==1
30 replace BossViceExp=1 if bossExp==1
31
32 foreach var of varlist bossExp viceExp BossViceExp {
33   label variable `var' "Chairmanship & Vice-Chairmanship Experience"
```

```
34   tab 'var', m
35 }
36 bro IndividualName year_proxy  Chairman   bossExp viceExp BossViceExp
     IndividualRole CompanyName if IndividualName=="Adam Reynolds"
37 bro IndividualName year_proxy  Chairman   bossExp viceExp BossViceExp
     IndividualRole CompanyName if IndividualName=="Adrian Howard Martin"
38 bro IndividualName year_proxy  Chairman   bossExp viceExp BossViceExp
     CompanyName
39
40
41 *1.6 Director's Number of distinct sectors
42 ********************************************
43     egen uni_sectors = tag(Sector2 id_director_year)
44     egen director_uni_sectors = total(uni_sectors), by(id_director_year)
45 /*visual test*/      sort id_director_year
46                 bro IndividualName year_proxy  uni_sectors
     director_uni_sectors Sector2 CompanyName if IndividualName == "Adam
     Richard Wilson"
47                 egen checking = count(Sector2), by (id_director_year)
48                 bro IndividualName year_proxy  checking uni_sectors
     director_uni_sectors Sector2 CompanyName
49                 drop checking uni_sectors
50     label variable director_uni_sectors "Director's Number of distinct
     sectors works on yearly"
51
52     egen letsee = total(Sector3), by(id_director_year)
53 /*visual test*/      sort id_director_year
54                 egen checking = count(Sector2), by (id_director_year)
55                 bro IndividualName year_proxy  checking letsee Sector3
     Sector2 CompanyName
56                 drop checking
57 foreach var of varlist letsee boardTenure {
58   bysort id_firm_year: egen `var'_total = total(`var')
59   gen `var'2board= `var'/`var'_total
60   replace `var'2board=. if `var'==.
61 }
```

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